



IZONE

SOUTHERN BUSINESS HUB



**HARRISON
GRIERSON**

PROPOSED PLAN CHANGE 10 - VISUAL IMPACT ASSESSMENT

FINAL - OCTOBER 2009



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APPENDIX ONE: EXAMPLES OF INDUSTRIAL PARKS

IZONE SOUTHERN BUSINESS HUB, ROLLESTON PROPOSED PLAN CHANGE 10 VISUAL IMPACT ASSESSMENT

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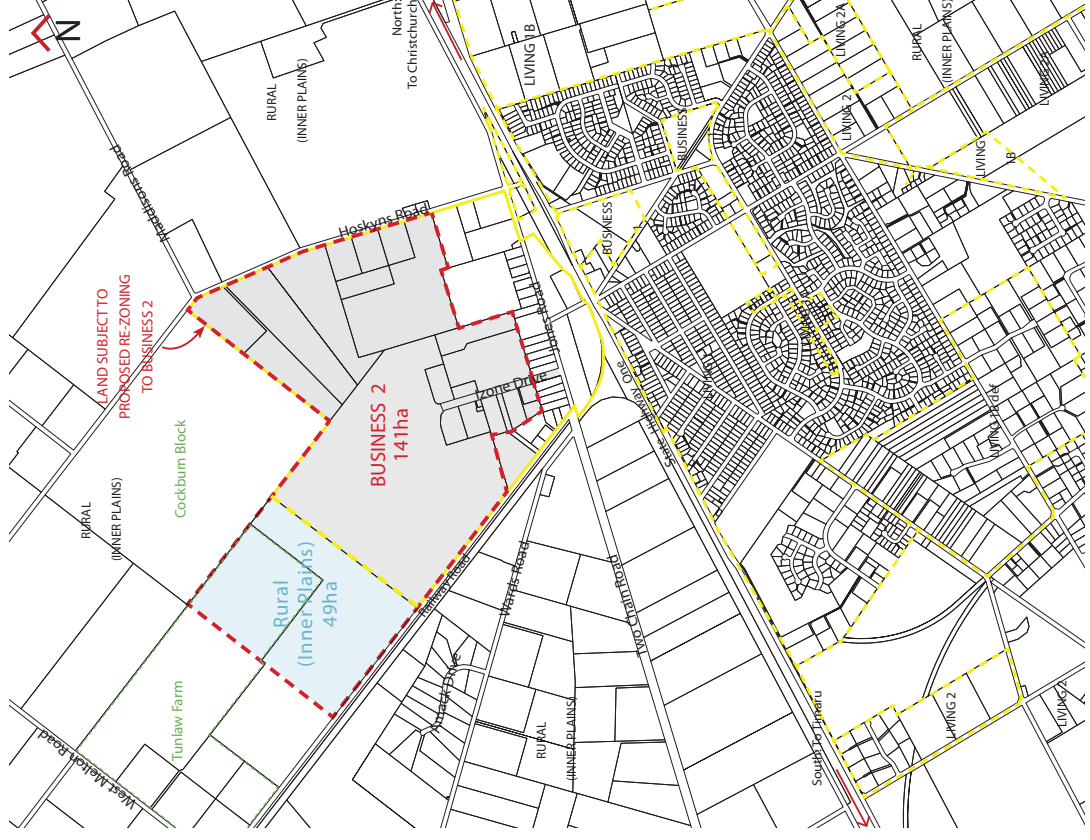
This Visual Impact Assessment (VIA) forms a background document to a Proposed Selwyn District Council Plan Change, which will create a modified Business 2 zone (to be known as Business 2A). This VIA considers visual impacts that may arise consequent to Proposed Plan Change 10, which applies the proposed Business 2A zone to areas forming part of the Izone Southern Business Hub, on the north side of Rolleston. Figure 1 identifies the 141 hectare area which is being re-zoned from Business 2 to Business 2A, and the 49 hectare area being re-zoned from Rural (Inner Plains) to Business 2A.

This report considers possible visual effects associated with the re-zoning and development of land. Because the Business 2 zone contains very similar bulk and location provisions to Business 2A, the report focuses on the 49 hectare being rezoned to Business 2A from Rural (Inner Plains), which is referred to hereinafter as the "New Development Area."

The following reports were considered as background to this report:

- Canterbury Regional Policy Statement
- Partially Operative Selwyn District Plan
- Plan Change 5 to Selwyn District Plan
- Izone Outline Development Plan (Expansion into Area SR2) and Background Report (June 2008) (background document to Plan Change 5)
- Izone Outline Development Plan Background Report (September 2009) (background document to Plan Change 10)
- Rolleston Draft Structure Plan (June 2009)

FIGURE ONE: SITE LOCATION PLAN



ROLLESTON CONTEXT

Rolleston township is located south of State Highway 1 and includes a retail centre and a residential area predominantly based on single storey housing in individual subdivisions. Izone is located north of State Highway One, north-west of Railway Road and the Midland Railway Line and south-west of Hoskyns Road.

Urbanised land to the north of the State Highway consists mostly of business/industrial development. New development is taking place predominantly in Izone, though a new Business 2 subdivision south of Jones Road is also progressing. Izone has developed along Railway Road most of the way towards the area that is to be rezoned from Rural (Inner Plains) under Proposed Plan Change 10.

GROWTH POLICY CONTEXT

Rolleston's future growth is provided for under Variation 1 to Proposed Change 1 to the Canterbury Regional Policy Statement (RPS). This identifies and maps a series of Greenfield residential and business growth areas (refer Figure Two). Two of the latter include Area SR2, located immediately to the northeast of existing Izone, and Area SR1 located immediately to the northwest. Most of the area to which Proposed Plan Change 10 applies is thus fully included within the identified Urban Limits for Rolleston, shown in red in Figure Two. Area SR2 was rezoned from Rural (Inner Plains) to Business 2 under Plan Change 5 to the Selwyn District Plan, late in 2008.

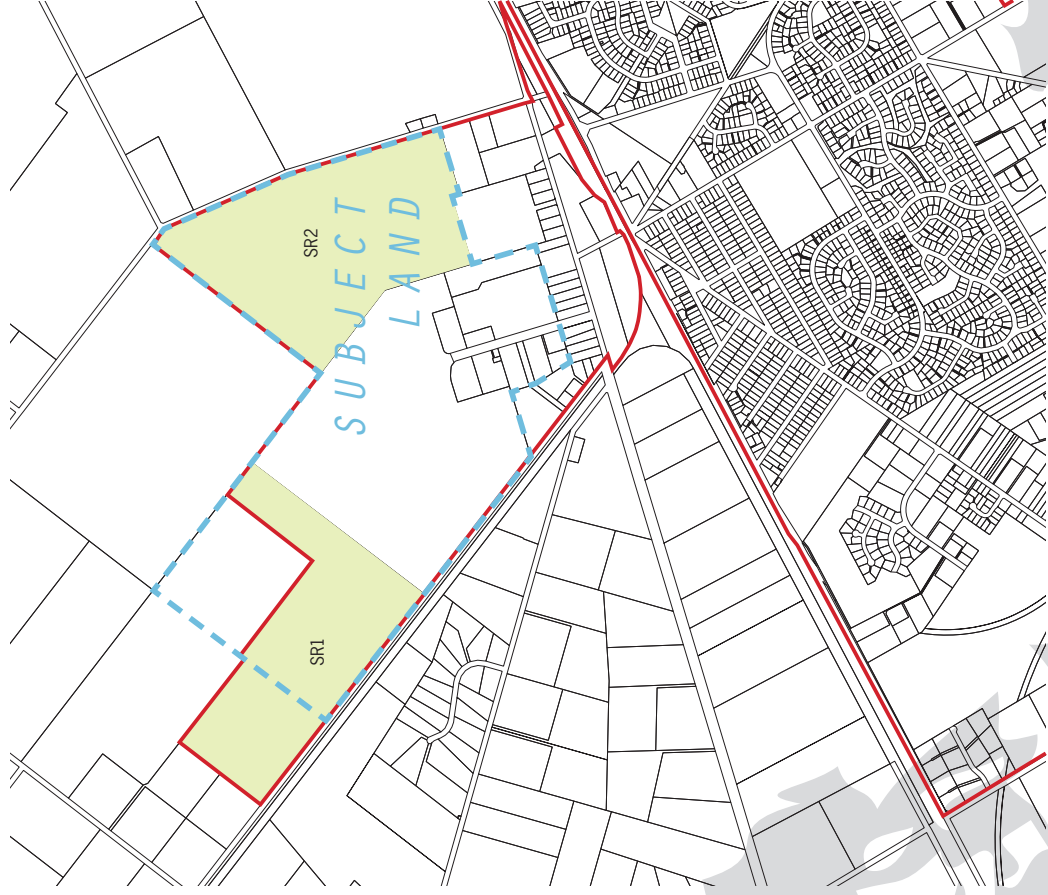
Selwyn District Council has purchased an area of land which was formerly part of Tunlaw Farm, and the Izone Planning Group has made submissions to Proposed Change 1 that include recognition that the change in the Tunlaw Farm boundary should be recognised in a modified urban limit line. This has been recommended for acceptance by the officer reporting on the submissions, which were heard in July 2009.

The Selwyn District Plan encourages expansion of the Business 2 zone at Rolleston, north of State Highway 1. Existing policies within the District Plan encourage development adjacent to existing development and in such a way as to achieve a compact township shape. Compact zones are encouraged in preference to long strips of development.

The Draft Rolleston Structure Plan also identifies that the growth of Rolleston is anticipated to be significant, and identifies all the area to which Proposed Plan Change 10 applies as within the Study Area for the expanded town.

It is also implicitly recognised in the Draft Rolleston Structure Plan that the existing business zoning for the town does not provide enough land for the retail and related town centre facilities that would be expected of a city of 18,000 to 22,000 people.

FIGURE TWO:
LOCATION OF SR1, SR2, EXISTING IZONE AND PLAN CHANGE AREA



LANDSCAPE CHARACTER

CANTERBURY PLAINS LANDSCAPE

The land that the Proposed Plan Change seeks to rezone generally flat land that continues for significant distances in all directions. This topography together with an established vegetative framework representative of the Canterbury Plains allows no significant views to the site from the surrounding district.

North and east, the landscape is rural, characterised largely by open fields with some grouped tree plantings and reasonably extensive use of long shelterbelts and hedgerows. The hedgerows are well established and typically range from 6 to 8m in height. This combination of flat, open land and strong, linear roads and hedgerows provides a typical rural amenity. The perceived level of amenity increases slightly with distance from Rolleston.

BUSINESS LAND CHARACTER

The land to the south of Izone has, or is assuming, a business/industrial visual character as business land is developing. The north side of Jones Road consists mostly of relatively low amenity historic industrial uses. The NRM Feeds building, on the corner of Jones Road and Hoskyns Road, is the tallest building in the area, at 24.2m. Nearby, and within the proposed expansion land east of Hoskyns Road, there is a mast of 37.0m high, and a cell tower of 27.2m high.

By comparison, development within Izone has a higher level of visual amenity due to landscaping on sites and on the main boulevard road (Izone Drive) and the presence of the newly formed "amenity hub" park. Buildings to date are low rise and wide span, with the tallest existing building being the Warehouse Distribution Centre, which is 13.8m high. The tallest structure is a portion of the CRT Seed Store, which Aurecon advises is up to 20.5m in height. (the maximum height limits for the Business 2 zone are 15m for buildings and 25m for structures).

Because the majority of the land that is subject to the Plan Change is already zoned Business 2, the potential for most visual change (relative to that which would be expected under existing Izone) is in the area currently zoned Rural (Inner Plains), northwest of the existing Izone area. This is a rectangular shaped parcel of land, about 49 hectares in area, is referred to hereinafter as the "new development area", and the assessment focuses on it. The new development area will be generally visible from the existing Izone development. It will also be visible from locations generally to the southwest, particularly Railway Road.

Given that the new development area has, in effect, been identified as a business growth area through Proposed Change 1 to the Regional Policy Statement, it is clearly anticipated in a regional and local sense that this land too, will change in its visual character.

EXISTING LANDSCAPE AND AMENITY CONTROLS IN IZONE

Amenity in Izone is reasonably high through the developer's deliberate decision to establish and maintain good amenity to the streets and site frontages. Also, quite specific requirements for soft landscaping within lots already apply to Izone under the Business 2 zoning, which provide specific planting requirements and species schedules. Specific setback controls also apply to the Rural zone boundary. All new roads require a 3m landscaping strip made up of species selected from a schedule included at Appendix 21 and provided according to the details of the landscaping rule.

In the development of Proposed Plan Change 10 work was done establishing the appropriate interface with the adjoining land and land on the opposite side of Railway Road. It was clear that at the Railway Road and the modified Tunlaw Farm and Cockburn Farm boundary locations a philosophy of substantially screening the development from the rural area would need to be followed as these boundaries would represent the northern and southwestern edges of the completed and expanded business zone of Rolleston. These aspects are incorporated into Proposed Plan Change 10, including specific provisions relating to Railway Road.



DETAILS OF PROPOSAL

Proposed Plan Change 10 to the Selwyn District Plan introduces a new Business 2A zone and apply that zoning to the existing Business 2 zoned areas of zone, and to the new development area. Aspects of Proposed Change 10 that relate to visual impact are as follows:

BUILDINGS, ACCESSWAYS AND LANDSCAPING

Rules 16.1.2.1 and 18.5.2.2 define landscaping requirements for road frontages in the proposed Business 2A zone. These rules require a 3 metre wide landscaping strip along the road frontage for all lots except for Railway Road. The specific planting requirements of Rules 16.1.2 and 18.5.2.2 are similar to those required for the Business 2 zone and are designed to achieve a narrow, dense strip of vegetation to a reasonable height (6 – 10m, depending on species selected). The details of Appendix 21 have been modified to introduce additional species options.

Recognising the effective screening provided by the existing established hedgerow shelterbelt on Railway Road, a new clause has been added to Rule 24.1.3.13 requiring the retention of the existing shelterbelt. Similarly, a new Rule 17.6 has been added requiring a restricted discretionary resource consent process for any gaps created within it, for road, rail and other access. This process becomes discretionary if the width of the gap exceeds 30m. Also in Rule 24.1.3.13 a new clause requires the establishment of a Leyland cypress planting strip to achieve a similar shelterbelt hedgerow on the other side of Railway Road, prior to any subdivision of the new development area.

Rules 18.5.2 and 24.1.3.13 define landscaping requirements for boundaries with any Rural zone. The rules require a 2.5m wide landscaping strip be provided on the Cockburn Boundary to a minimum height of 6.5m and similarly a 5m wide strip on the Tunlaw Boundary. Specified plant species are of a hedgerow type and should achieve a dense visual screen between buildings on the site and adjacent rural land. Existing hedgerows in locations where landscape strip provisions apply are required to be retained until new planting achieves a height of 3m.

BUILDINGS AND HEIGHT

Rules 16.6.2 and 18.2.1 propose a maximum height of 15m for all buildings in the Business 2A zone, and a maximum height for all structures of 25m. This is consistent with the existing height limits for the Business 2 zone.

Rule 16.6.3 requires resource consent for a building between 15m and 20m within the proposed Business 2A zone as a restricted discretionary activity (with matters of discretion limited to efficient and practical use of the site, visual impact and adverse effects on adjoining properties). This is a new rule that does not appear in the existing Business 2 zone provisions. The rule and its criteria focus on visual impact and effects on adjoining properties, through

the resource consent process, so its impacts have not been further considered in this VIA Report.

Rules 16.6 include also requirements whereby the reflectivity of parts of buildings over 15m in height influences the consent status and process (reflectivity of 40% or less is sought in effect).

Rules 16.6.5, 16.6.6 and 18.3.4 require resource consent to be obtained for any building with a height exceeding 20m, or utility structure exceeding 25m in height, as a discretionary activity.

BUILDINGS AND BUILDING POSITION

Rule 16.7.1 requires a height recession plane to be applied along the boundary between the proposed Business 2A zone, and the adjoining Rural zoned land. The recession required is measured from 2 metres above the boundary.

SETBACKS FROM BOUNDARIES

Rules 16.7.2.4 and 18.2.1.2 require building setbacks to be applied. These are:

- 10m from the boundary of roads, including Railway Road;
- 10m from the boundary of Rural zoned land to the northwest (the Tunlaw Farm Block;
- 15m from the boundary of Rural zoned land to the northwest and northeast (the Cockburn Block).

The setback and landscape rules which are applied to various Landscape Treatment Areas are illustrated in Figure 4.

ACTIVITIES AND LIGHT SPILL

Rule 22.6.1 provides standards for exterior lighting. The proposed Business 2A zone shares the same lighting standards as the Business 2 zone, which require consent as a discretionary activity if lighting spill to adjacent rural land exceeds 3 lux, or is directed toward roads outside the zone.

OUTLINE DEVELOPMENT PLAN

Proposed Plan Change 10 replaces the existing outline development plans with a new Plan, shown as Figure 3 overleaf.

LEGEND

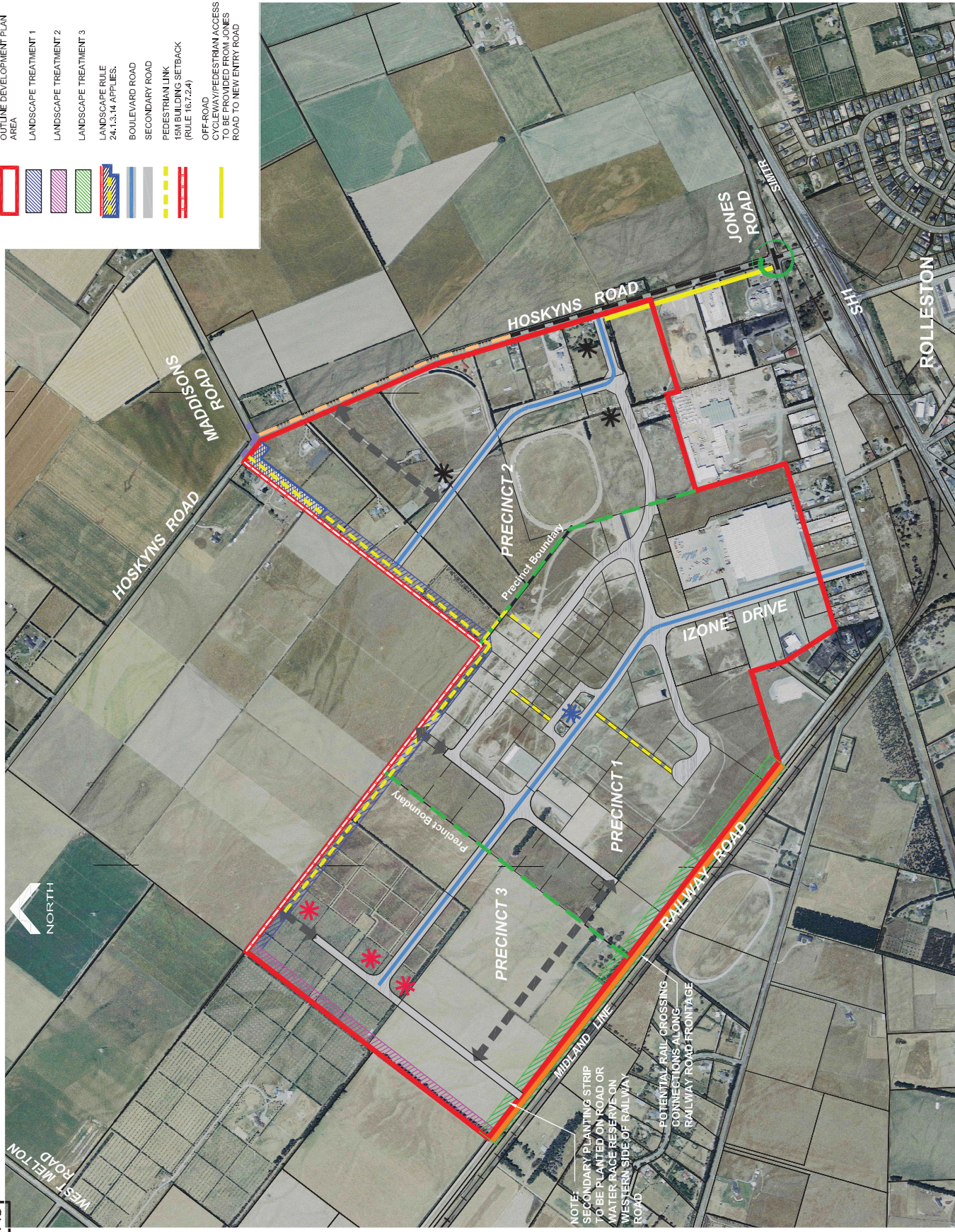
OUTLINE DEVELOPMENT PLAN AREA

- LANDSCAPE TREATMENT 1
- LANDSCAPE TREATMENT 2
- LANDSCAPE TREATMENT 3
- LANDSCAPE RULE 24.1.3.14 APPLIES
- BOULEVARD ROAD
- SECONDARY ROAD
- PEDESTRIAN LINK (RULE 16.7.24)
- 15M BUILDING SETBACK
- OFF-ROAD CYCLEWAY/PEDESTRIAN ACCESS TO BE PROVIDED FROM JONES ROAD TO NEW ENTRY ROAD

AMENITY HUB OPTIONS

- HOSKYN'S ROAD UPGRADE (RULE 24.1.3.15)
- ADDITIONAL CONNECTION IF POSSIBLE
- POTENTIAL RAIL CROSSINGS
- BALANCE HOSKYN'S ROAD UPGRADE (RULE 24.1.3.17)
- HOSKYN'S MADDISON'S ROAD UPGRADE (RULE 24.1.3.18)
- JONES / HOSKYN'S ROADS INTERSECTION UPGRADE (RULE 24.1.3.20)

NOTE: LOTS ABUTTING HOSKYN'S ROAD SHOULD FRONT ONTO AND ACCESS HOSKYN'S ROAD - REFER RULE 24.1.3.11



Rev.	Date	Revision Details	By
G	14.10.9	MINOR AMENDMENTS	RS
F	14.9.9	MINOR AMENDMENTS	RS
E	26.8.9	MINOR AMENDMENTS	RS
D	26.6.9	OUTLINE DEV AREA ADJUSTED	RS
C	15.6.9	MINOR AMENDMENTS	RS
B	22.5.9	AMENDMENTS FROM H & G	RS
A	05.09	ISSUE	RS



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Project



Drawing Title:
**OUTLINE DEVELOPMENT
PLAN
BUSINESS 2A ZONE**

PROPERTY DATA

The property data has been sourced from Land Information New Zealand (LINZ) and is current as at January 2009.
AERIAL PHOTO
The aerial photography was flown in January 2006 at a negative scale of approximately 1:27,500 & supplied courtesy of Selwyn District Council.
The image has been orthorectified at ground level to a low order and aligned with surveyed features. The image will still be subject to some distortion.

Survived	Designed	Drawn	Verified	Approved
Signd	Signd	Signd	Signd	Signd
Date	Date	Date	Date	Date
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Scale	1:10 000@A3			
Rev	PL 01			
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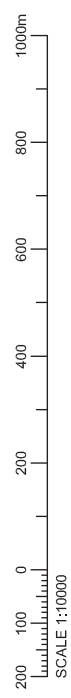
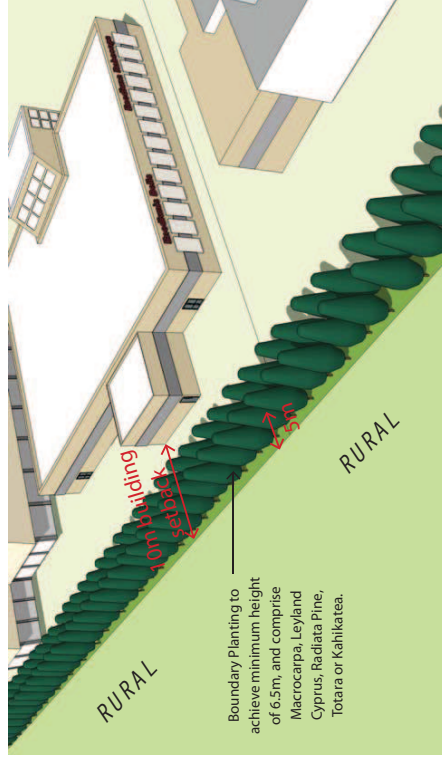
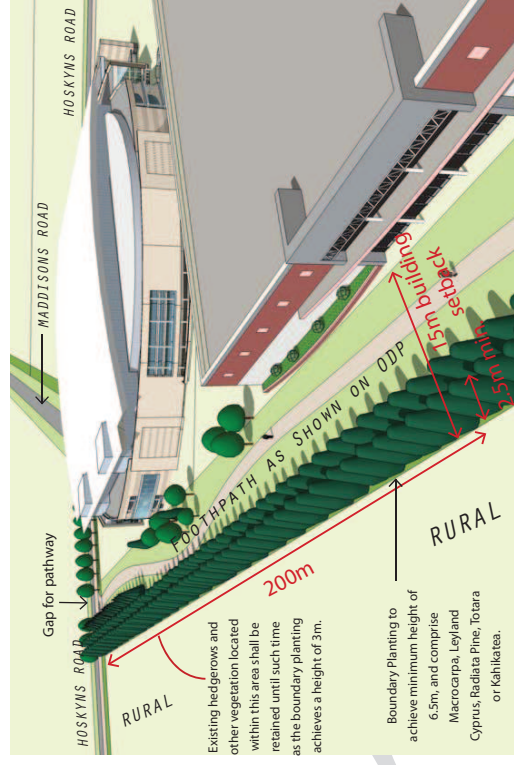


FIGURE FOUR:
EXAMPLES OF BOUNDARY TREATMENTS

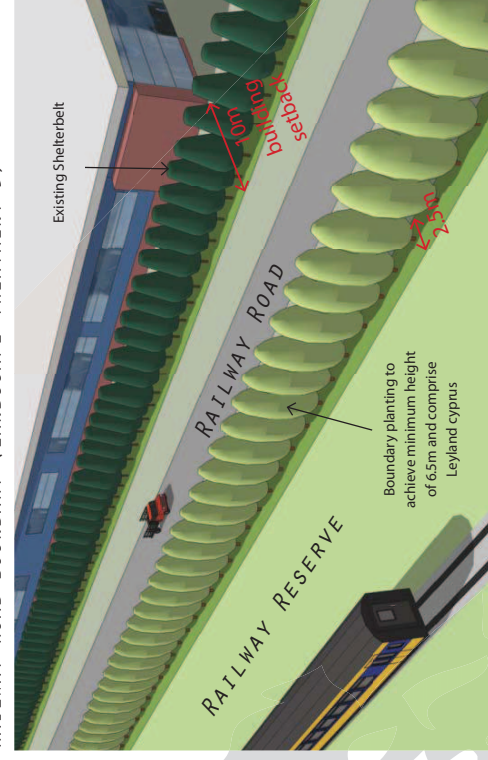
TUNLAW BOUNDARY (LANDSCAPE TREATMENT 2)



COCKBURN BOUNDARY (LANDSCAPE TREATMENT 1)



RAILWAY ROAD BOUNDARY (LANDSCAPE TREATMENT 3)



VISUAL ASSESSMENT METHODOLOGY

In order to assess the visual nature and visual extent of the study area, site visits, a photographic study and a field survey of the site and surrounding landscape were undertaken in May 2009.

BASIS FOR REPRESENTATIVE VIEWPOINTS

To demonstrate potential visual effects on the character of this landscape, six key public viewpoints were selected from which it is considered the visual effects could be potentially most significant. These viewpoint locations are considered to be representative of the views available to the general public from these areas. When reviewing these representative viewpoints an idea of the likely visual effects can be established. When assessing likely visual effects the following are taken into consideration:

- The extent to which the development may be visible within the landscape and the extent to which the proposed development may be integrated into the landscape;
- The characteristics of the development's foreground and background from the representative viewpoints;
- The size and makeup of the viewing audience;
- The proximity of the viewing audience to the site and the prominence of the development within that view;

Concerning public views from areas further afield than these viewpoints, it was observed that little if anything of the development in the new development area is likely to be discernable at these distances to the northwest or southeast along Railway Road, or southwest of Wards Road and that if any building is glimpsed it will be in the context of a "small object" within a much wider and expansive rural plains view. The only structures permitted above 15m in height will be utilities structures, which will be hard to discern from these distances.

In addition, the new development area was photographed from the road in the Arnack Drive Rural Residential Area. These are viewpoints 7a to 7c. Photomontages were not generated for these viewpoints because little of the development could be seen from this location.

BASIS FOR GENERATING 3D MODEL

Based on observations of typical business areas, it is highly unlikely that many of the buildings will be built to the full potential of the 15m height limit. To test this hypothesis, three new business/industrial parks in Auckland were examined as part of the reporting on Plan Change 5. The heights of medium and large buildings on large sites (20,000m² or greater) were surveyed. This is consistent with the demand that Izone is experiencing for sites at the larger end of the size spectrum.

The outcomes of this study are included as Appendix One.

CONSTRUCTING THE MONTAGES – TWO SCENARIOS

The development area and its context have been constructed in 3D using Google Sketchup Pro software.

Two scenarios have been presented in this model; one showing buildings at their maximum permitted height of 15 metres, and a second scenario where built form is shown to a more likely height of 11.5m, based on the precedent established by existing buildings at Izone and demonstrated in the Auckland examples described at Appendix One of this report.

In both scenarios, buildings are shown aligned with minimum setbacks in accordance with the Plan Change development controls (e.g. 10m along Railway Road). The chances of this being an outcome for all buildings along these frontages is very low. Instead, it would be expected that buildings will have a variety of heights, sloping rooflines, varying setbacks and a broken façade. This would further mitigate the impact on visual amenity from all viewpoints considered.

METHOD FOR GENERATING PHOTOMONTAGES

To represent the potential height and scale of future development, the selected viewpoint photographs are overlaid with the 3D Google Sketchup Pro model. The model and photograph are aligned by matching their viewing location (surveyed by GPS), field of view, angle of view and height of view (surveyed). Accuracy is improved by visually matching up several landscape features that have been modelled using survey data, and are visible in the photographs. Finally, the overlaid images are masked using Adobe Photoshop to produce photomontages which show the 11.5m and 15m height scenarios as grey blocks.

FIGURE FIVE: VIEWPOINT MAP



VISUAL ASSESSMENT

Figure Five shows the location of the representative viewpoints, and includes notes detailing exactly where the photographer was standing. At the end of the discussion of each viewpoint are recommendations which were made as part of the preliminary work on this assessment, and which are now embodied in the Proposed Plan Change.

REPRESENTATIVE VIEWPOINTS 1, 2, 3

Locations: Several points along Railway Road which are adjacent to the new development area, facing northwest or southeast.

These viewpoints capture the visual impact of development on people travelling along Railway Road (in either direction). Although this road is not expected to carry a large amount of traffic, these viewpoints demonstrate the greatest degrees of change in the landscape. The views will principally apply to motorists, though it is unlikely that any travellers on Railway Road will face directly toward Izone – ie the views will be transient, and oblique.

A key feature of Railway Road is the existing well-established hedgerow (of 6 to 8m height) which, under Proposed Plan Change 10, is required to be retained. The hedgerow's screening effect is evident in the montages, where only the upper portions of the 15m and 11.5m high building envelopes are obvious.

Railway Road also requires a building setback of 10m. As shown, this has the effect of reducing the bulky appearance of buildings relative to Railway Road, as they appear reduced in height when set back from the boundary behind screen vegetation.

Overall, these montages show a change in the landscape of Railway Road, and the degree of that change is similar to that which it can be anticipated will occur to Railway Road further southeast of Viewpoint 1 (i.e. where the land adjacent already has a Business 2 zoning). However, the nature of this change is more due to the conscious presence of development rather than direct adverse effects such as shading or interrupted views. Actual visible development will likely be very minimal, because of the mitigation provided by the hedgerow. Thus its retention is critical.

Recommendations:

No works should be undertaken, nor materials stored, within 5m of the existing hedgerow, unless it can be demonstrated that it will not be damaged, as its survival is crucial for mitigating the impact of views on rural character. Rules have been included to this effect.

Where required for transport crossings, gaps in the hedgerow should be kept to a minimum. Gaps for transport crossings should not exceed 30m, and those less than that require a Landscape Plan and other assessments to be submitted, which demonstrates mitigation of the effect of the reduction in that hedgerow's screening ability. Rules have been included to this effect.

VIEWPOINT 1

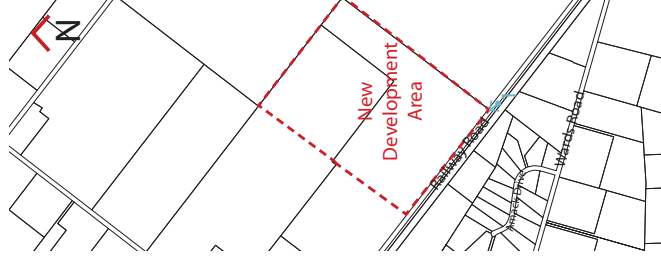
EXISTING



11.5M SCENARIO



15M SCENARIO



VIEWPOINT 2

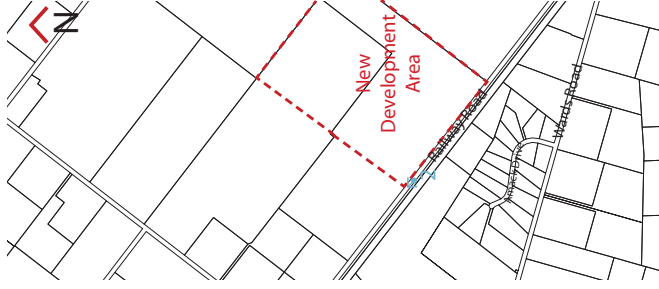
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11.5M SCENARIO

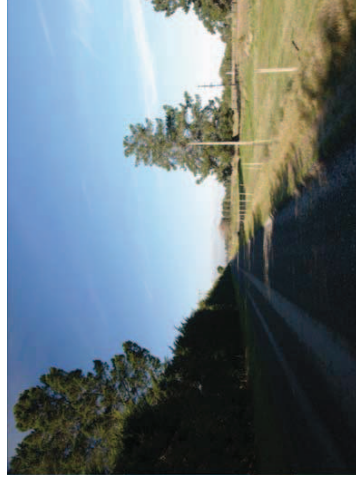


15M SCENARIO

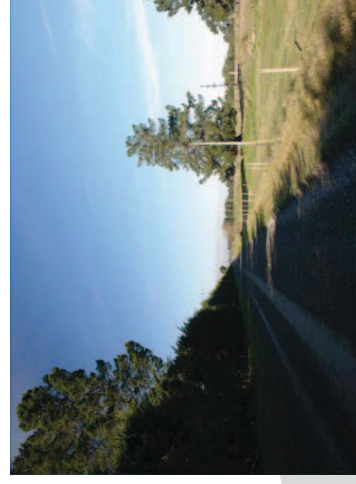


VIEWPOINT 3

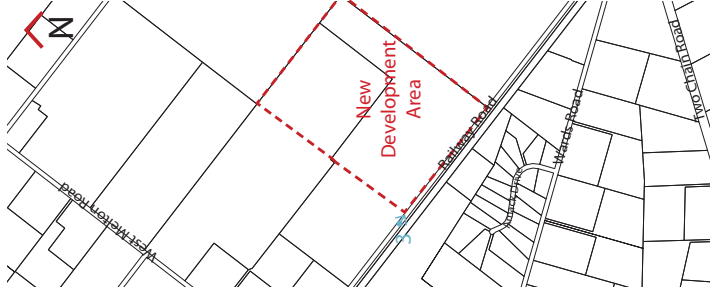
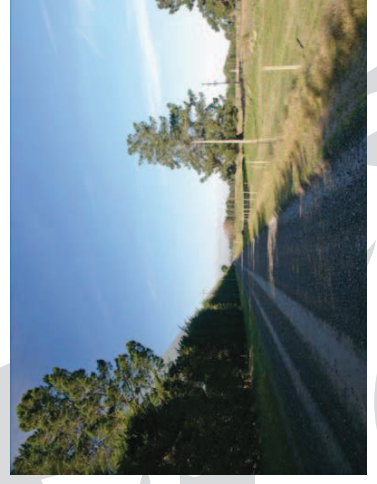
EXISTING



11.5M SCENARIO



15M SCENARIO



REPRESENTATIVE VIEWPOINT 4

Location: On the left side verge of Wards Road, looking northwest, opposite property boundary between Lots 2 and 3 DP352696. This is approximately 473m from the closest point of the new development area. The photomontage of this viewpoint demonstrates a visible change in the horizon when looking toward the development area. At 15m high, the building envelope is significantly taller than the hedgerow that, due to the distance from the subject, provides little screening above its 7m (approx) height.

In terms of overall visual effect, the 11.5m scenario shows only a minor change, due to the distance of the development from the subject.

Other trees and structures that are part of the midground of this rural landscape assist in breaking up or de-emphasising the bulky form of any possible development.

Recommendations:

A hedgerow should be planted in the railway reserve to provide a secondary screen that is closer to the viewer than the existing hedge (therefore providing more 'perspective advantage' from parallax effect). Reaching a height of 6.5m or more, the apparent size (due to perspective) would reduce the visual presence of development by a reasonable amount. This could screen parts of the view that are exposed through any removal of the existing hedgerow (where transport crossings are required). A rule has been included to this effect, and the species Leyland cypress has been selected as being appropriate.

No works should be undertaken, nor materials stored, within 5m of the existing hedgerow, unless it can be demonstrated that it will not be damaged, as its survival is crucial for mitigating the impact of views on rural character. A rule has been included to this effect.

Buildings constructed in the development area could have an adverse visual effect due to use of highly-reflective cladding or roofing material(s). As such, they should use a less-reflective material instead. Rules have been included to this effect.

VIEWPOINT 4

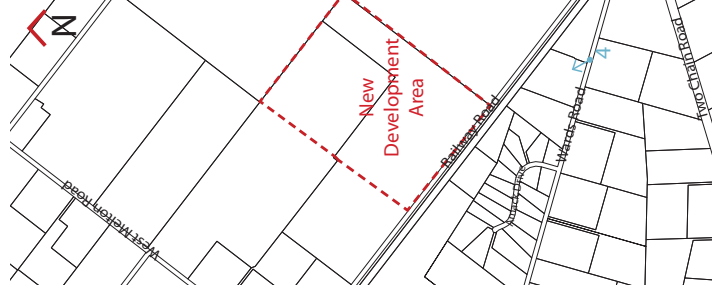
EXISTING



11.5M SCENARIO



15M SCENARIO



REPRESENTATIVE VIEWPOINT 5

Location: On the left berm of Wards Road, looking northeast towards corner of the development area, from about 927m to the closest point of the new development area.

From this viewpoint, any views of the proposed new development area are completely obscured by vegetation in the foreground, including hedgerows and trees (up to 24.8m high). This is typical of many parts of the countryside surrounding the Plan Change area, where established hedgerows and tree clusters provide shelter from the wind as well as visual screening to the development site. The presence of existing vegetation is therefore very important in mitigating the visual impact of new development and protecting the rural character of this landscape.

Recommendation:

As above, no works should be undertaken, nor materials stored, within 5m of the existing hedgerow, unless it can be demonstrated that it will not be damaged, as its survival is crucial for mitigating the impact of views on rural character. Rules have been included to this effect.

REPRESENTATIVE VIEWPOINT 6

Location: Intersection of Railway Road and West Melton Road

This viewpoint captures the view that a traveller on West Melton Road or Railway Road may perceive, when facing south-east toward the new development area.

The large distance (820m) and very oblique angle to the development area, in combination with the screening provided by the hedgerow (which is approx 7m high at this location), serves to diminish the visual presence of the 15m height scenario to a minor/negligible level. The 11.5m height scenario does not produce any visual impact as it is completely screened.

Some presence of industrial development might be experienced by a viewer at this location, but this is difficult to determine, especially in the rural context where various other structures can also be seen.

VIEWPOINT 7A, 7B AND 7C.

Location: The driveways of three properties on Armack Drive, facing toward dwellings and towards the new development area through gaps in the hedgerows.

Views to any part of the new development area from these locations is completely screened by vegetation in the foreground. Exact views from the inside dwellings on the Armack Drive sites could not be determined without permission of the landowners, but is expected to be similar to that of viewpoints 7a - 7c, which were taken from Armack Drive. Retention of existing vegetation in the form of the existing hedgerow will, therefore, be very important in protecting the character of this landscape.

This will be further enhanced in time by the establishment of the new hedge on the southwest side of Railway Road (as noted, this is required by a rule), to be established prior to any subdivision of the new development area.

VIEWPOINT 5

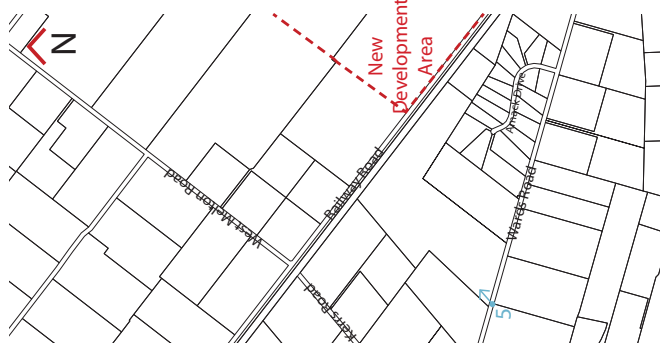
EXISTING



11.5M SCENARIO



15M SCENARIO

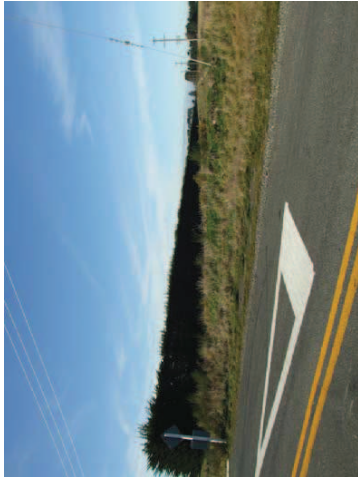


VIEWPOINT 6

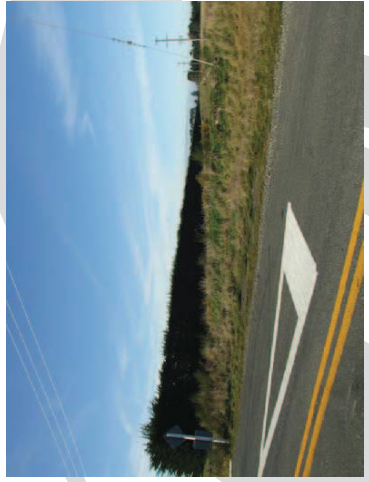
EXISTING



11.5M SCENARIO



15M SCENARIO



VIEWPOINTS 7A, 7B, 7C

7A



7B



7C



SUMMARY

The report has considered possible visual change arising from Proposed Plan Change 10 at seven public viewpoints. These viewpoints have been identified as representative of the views the public will have of the new development area. Railway Road and Wards Road are not heavily trafficked, and the number of people who experience any change in the experience of the landscape through expansion into the new development area will be low.

For six public viewpoints montages have been created illustrating the “worst case” scenario of 15m high buildings developed along the entire 10m setback line, and comparing these with a more “likely” scenario of 11.5m (being an average height for buildings based on consideration of actual heights as other business parks). It is important to note, that even this markedly overstates the likely impact because of the likelihood of gaps between buildings, modulation, and greater setbacks along the Railway Road boundary.

Possible views of the development from Armack Drive have also been considered. The rear of the Armack Drive properties is some 290m from the closest point of the new development area. The Plan Change includes provisions requiring the establishment of an intervening hedge on the southwestern side of Railway Road intended to provide further screening for these properties.

More detailed observations on key matters are as follows:

WORST CASE AND LIKELY HEIGHT SCENARIOS

Viewpoints 1, 2 and 3 (on Railway Road) demonstrate the highest degrees of visual impact. It can be observed that in combination with the proposed 10m setback the 15m high building envelope is reasonably obvious to travellers along Railway Road though from Wards Road (Viewpoint 4) the impact is considerably offset by distance. The 11.5m scenario shows a far less obvious visual impact in Viewpoints 1 to 3, to the extent that it could be considered minor.

As a general comment, it would be expected that likely impacts will be less again, as noted, because buildings are unlikely to be built right to the setback line, there will likely be breaks in buildings, and buildings will likely include modulation.

IMPORTANCE OF EXISTING RAILWAY ROAD HEDGEROW

The screening effect of the hedgerow along Railway Road's boundary with both the existing zoned area and the new development area is a critical mitigating factor in reducing the visual impact of development. It is therefore imperative that it be generally retained along the whole length of Railway Road (some gaps for access are acceptable), and that measures are included in the Plan Change to ensure its integrity (measures which did not exist under the Business 2 zone).

The Plan Change includes provisions to this effect.

IMPORTANCE OF PROPOSED RAILWAY ROAD HEDGEROW

The establishment of a second hedgerow, on the southwestern side of Railway Road, will have a number of benefits in respect of Viewpoints 4 and 7, and particularly for Armack Drive properties. Among these will be the mitigation it will offer when there are gaps created in the existing hedgerow, e.g for rail access.

The Plan Change includes provisions requiring that the new hedgerow is established prior to subdivision of the new development area.

GAPS IN THE HEDGEROWS

The provisions of the Plan do not allow access into properties from Railway Road, but do envisage a possible road access and possible rail siding access, which would create gaps in the hedgerow. Therefore it is important that these gaps are not excessive in length.

The Plan Change includes provisions, requiring that gaps do not exceed 30m in length and that when gaps are created, a resource consent process is followed, and a landscape plan and other reporting is provided looking at mitigation, cumulative effects, and at ensuring the health of the adjoining hedgerow.

REFLECTIVITY

If tall buildings are constructed in the new development area they should use low reflectivity materials. The Plan Change goes beyond this in introducing a reflectivity of 40% as a matter triggering specific assessment in buildings over 15m high.

CONCLUSION

Through the steps outlined in the visual assessment it has been possible to identify important mitigations in respect of potential visual impacts to ensure the above matters are addressed. The analysis undertaken in the visual assessment identified a series of recommendations that needed to be addressed in the Plan Change in order to avoid, remedy or mitigate any potential negative visual effects. As noted throughout, the finalised Plan Change now includes controls or criteria addressing all of these recommendations.

As such it is considered any potential adverse landscape and visual effects arising from development in accordance with the Plan Change will be no more than minor.

EXAMPLE ONE: AIRPARK

The "Airpark" Business Park, in Manukau City close to Auckland International Airport. It was selected because its proximity to the airport may mean it will attract a similar range of large scale distribution and industrial/commercial users to Izone. The area is zoned Business 5 in the Manukau District Plan. This zone has no height limit.

The representative selection of buildings averages 11.5m and ranges from 8.0m to 14.3m. As can be seen, the buildings are often characterised by a low pitched gable roof form with a very wide span. It is evidently the large scale of the sites - which provide opportunity for a wide roof span for large industrial users - that is attractive, not the potential to build to great height.



1. Mondial
Site: 50,000 sqm
Height of wall: 11.0m
Max height: 14.3m



3. Ventura Inn
Site: 15,000sqm
Height not surveyed.



2. Bendon
Site: 16,300 sqm
Height of wall: 11.9m
Max Height: 13.7m



4. Kuehne & Nagel
Site: 14,000sqm
Height of wall: 11.5m
Max height: 13.8m



5. Hanes
Site: 6,000sqm
Height of wall: 11.3m
Max height: 12.2m



6. NZ Bloom
Site: 5,416 sqm
Height of wall: 10.2m
Max height: 12.9m



7. Fitness Express (Office Park)
Site: 5,178sqm
Height: 8.0m



8. Conroy
Site: 5,000sqm
Height of wall: 9.4m
Max height: 10.8m



9. Eratelle
Site: 2,521sqm
Height of wall: 8.2m
Max height: 10.1m



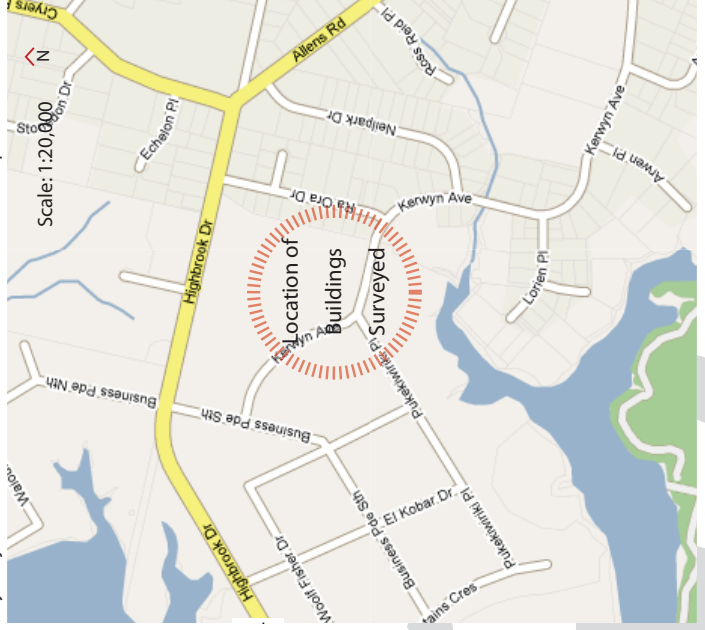
10. Offices (D-BASF, Alpha)
Site: 2,244sqm
Height: 8.0m

EXAMPLE TWO: HIGHBROOK

The "Highbrook" Business Park is also in Manukau City and close to Auckland's Southern Motorway. It was also selected because its proximity to the airport and motorway may mean it will attract a similar range of large scale distribution and industrial/commercial users to the zone. It is also an acclaimed design that is attractive, but not shy of presenting industrial character to the area. Highbrook also zoned Business 5 in the Manukau District Plan – i.e. 100 height limit. The area of Highbrook that has been completed is characterised by very large sites.

The representative selection of buildings averages 11.1m in height and ranges from 9.1m to 13.5m. Again, it is evidently the large scale of the sites that is attractive, not the potential to build to great height. Note; detailed cadastral or aerial information is not yet available for this area, so map below is indicative.

The highest buildings in the above estates, at 14.3m and 13.5m respectively, demonstrate that a 15m height limit – as per Selwyn's Business 2 and 2A zones - would appear to be suitable and appropriate to encapsulate most of the likely demand for height, while establishing a reasonable threshold above which any additional height sought could be appropriately subject to consideration via the resource consent process.



Damen, Hi-Tech +
Others
Height: 9.1m



NZ Post
Height of wall: 9.1m
Max height: 10.3m



Cottonsoft
Height of wall: 9.0m
Max height: 10.2m



DHL:
Height of wall: 11.3m
Max height: 13.5m



Geon:
Height of wall: 9.1m
Max height: 12.3m



EXAMPLE THREE: APOLLO DRIVE

The Apollo Drive area on Auckland's North Shore has a height limit of 12m under the Operative North Shore Plan's Business 9 zone, and because of its location has more of a "lighter business" emphasis and smaller site sizes than the other two.

While the heights are lower (averaging 9.8m) the visual appearance and horizontality of the buildings is relatively similar to the earlier examples. This suggests that there is unlikely to be a significant change in visual impact as a consequence of moving away from the existing zone philosophy (which does not significantly differentiate between activities) or its established height limit.



1. Rip Curl
Site: 3,089sqm
Height 11.4m



2. Metrix
Site: 5,282sqm
Height 10.7m



3. JMV / Drake
Site: 5,764sqm
Height 12.2m



4. Concept Lighting
Site: 1,729sqm
Height 9.6m

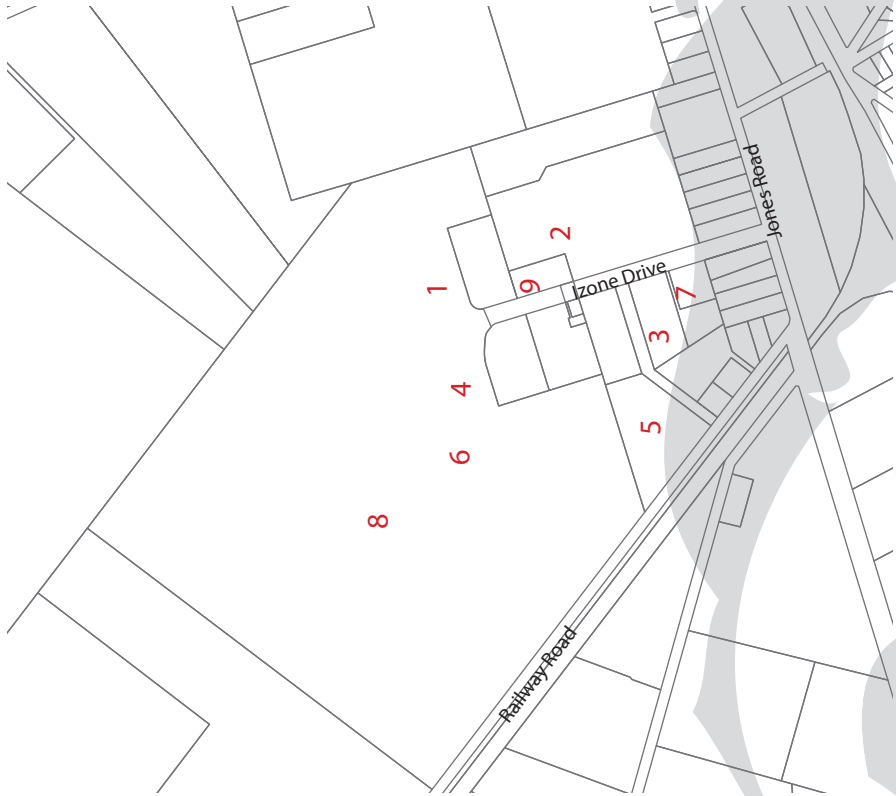


5. Habitat
Site: 4,913
Height: 5.0m



EXAMPLE FOUR: EXISTING IZONE

Through a combination of survey data and building plans supplied by Izone it is determined that representative selection of buildings at Izone averages 9.5m in height and ranges from 8.3m to 13.8m (being the Warehouse Distribution Centre). This shows that Izone, at present anyway, is also attracting users who are not taking full advantage of the height limit.



1. Height of wall: 8.0m
Max height: 9.3m

2. The Warehouse
Height of wall: 8.7m
Max height: 13.8m

3. Max height: 8.7m

4. Height of wall: 6.6m
Max height: 8.3m

5. Height of wall: 5.9m
Max height: 9.3m

6. Height of wall: 5.9m
Max height: 9.3m

7. Height of wall: 5.9m
Max height: 8.3m

8. Long Panel
Height of wall: 6.4m

