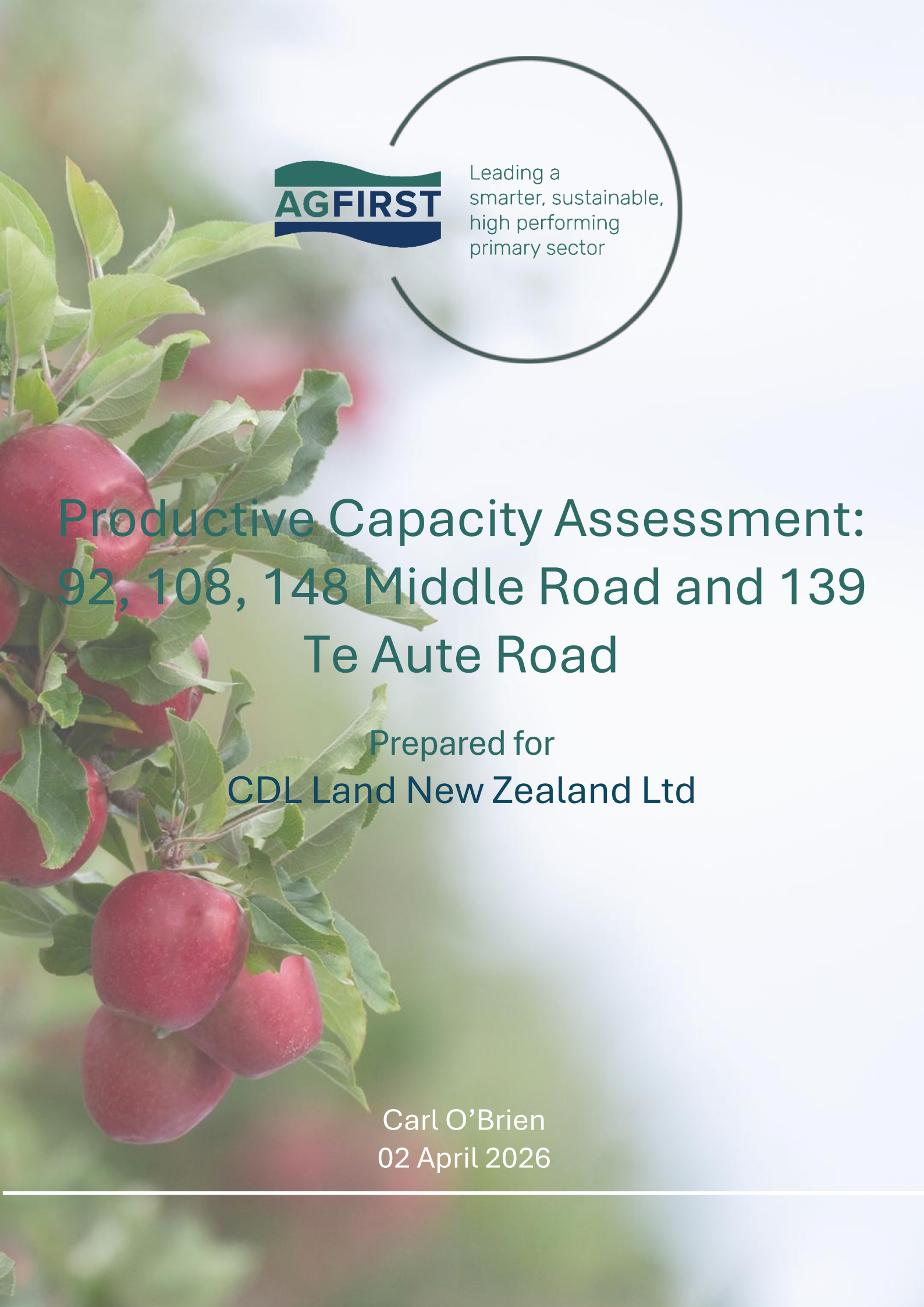

AGFIRST

Leading a smarter, sustainable, high performing primary sector

Productive Capacity Assessment: 92, 108, 148 Middle Road and 139 Te Aute Road

Prepared for

CDL Land New Zealand Ltd

Carl O'Brien

02 April 2026

Document Quality Assurance

Prepared by:	Carl O'Brien Senior Environmental / Horticultural Consultant	02 April 2026

Qualifications and Experience

I am a Senior Environmental / Horticultural Consultant at AgFirst Consultants HB Ltd. AgFirst Consultants HB Ltd is a specialist multi-disciplinary consultancy supporting the primary sector with world class knowledge and experience across farmers, growers, and agribusiness enterprises. I have been employed at AgFirst Consultants HB Ltd since July 2023.

I hold the qualifications of Post Graduate Diploma in Environmental Management (Distinction)(2012) and a Bachelor of Science (Biology) (2008), both from the University of Auckland. I am also a member of the New Zealand Institute of Primary Industry Management. I have 17 years of professional experience in Environmental Management, including roles such as General Manager / Director of Geosciences Ltd and Environmental Consultant with Mitchell Partnerships Ltd.

My area of expertise is within Environmental Management and the application and interpretation of the Resource Management Act 1991 (RMA), national environmental standards (NES), national policy statements (NPS), district plans and regional plans to the extent that these relate to soil and water resources. Within my role for AgFirst Consultants HB Ltd I have:

- Provided strategic advice on Highly Productive Land for the development of the draft Hawke's Bay Future Development Strategy to Hastings District Council, Napier City Council, and Hawke's Bay Regional Council as a joint strategy taskforce;
- Assessed productive capacity of properties throughout Hawke's Bay for private sector clients to determine their suitability for subdivision, change in use, or development as required under the National Policy Statement for Highly Productive Land, Napier City District Plan, and Hastings District Plan;
- Undertaken Land Use Change Assessments for private sector clients regarding changing contamination risk levels associated with productive land, irrigation, and intensification;
- Provided strategic advice and risk assessment on water allocation, water requirements, consent renewals, and demand modelling for a range of public and private sector clients with respect to water availability and use across the region; and
- Assisted a range of parties with Cyclone Gabrielle recovery works including soil remediation, productive capacity, land use assessments, and strategic business advice.

I confirm that, in my capacity as Author of this report, I have read and abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023.

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Contents

1.0 Executive Summary

CDL Land New Zealand Ltd are seeking referral under the Fast Track Approvals Act 2024 for the Middle Road Project, a residential subdivision and development of 30.6 ha located on the south western edge of Havelock Noth. The application site is located at 92, 108, 148 Middle Road and 139 Te Aute Road and interim concept plans identify a potential yield of 300 – 350 residential lots, supported by integrated three-waters and transport infrastructure and an open space network.

In support of this Fast Track referral process, AgFirst Consultants Hawke's Bay Ltd, have completed a productive capacity assessment to consider the suitability of this site for the proposed development in the context of land based primary production activities, highly productive land and versatile land.

The site is currently fragmented in titles and is being utilised for a combination of activities including rural residential, stormwater control, grazing, and small scale orcharding. Topography of the site slopes from both Middle Road and Te Aute Road, into the centre of the site where a low point of ponding and stormwater runoff occurs. Mapped hazards identified for the site include earthquake amplification, liquefaction, and 1 in 100 Year ARI flood risk. No water allocation is held by any of the properties. Saffron Thistle is recorded present across 4.5ha of the site, constraining the movement of stock, stockfeed, soil, and machinery. Permanent and long-term constraints identified in this assessment include:

- Soil wetness and associated water logging combine to create limited aeration within the soil profile which in turn significantly constrains the productive capacity of the site. In its current state, drainage and augmentation is required to alleviate this limitation alongside a mechanism to remove ponding flood flows. Without these significant amelioration works, a very short window within an average growing season exists where soils are suitable for intensive productive purposes. In above average rainfall years, there is limited ability to utilise the site, while in below average years, rooting depth will not be sufficient to provide drought resilience to perennial high value horticulture.
- Currently, contours and surface drains flow back into the centre of the site and then discharge into the Herehere Stream once a threshold is met. If this is to be remediated, significant land modification would be required. Due to the scale and likely cost, these modifications are a significant constraint on economic viability;
- Lack of Water allocation for irrigation means that there is no ability to produce high value crops from the site. The Heretaunga Plains are considered over allocated, and any new water allocation is prohibited under TANK Plan Change 9. AgFirst does not consider there is any reasonably practicable option to secure new allocation. It is acknowledged that the NPS-HPL addresses a 30-year horizon, and assessments must consider what could be achieved within that time, however for the purposes of water availability, water storage is the only mechanism by which new allocation could be introduced to the site. At this stage, no projects have progressed past

feasibility assessment and therefore have an unknown cost, timeframe, and allocation and therefore cannot be considered reasonably practicable;

- Onsite water storage has been considered however it is not considered reasonably practicable as:
  - A feasible mechanism for filling any water storage mechanism must still be available, which isn't available within the current overallocation framework;
  - At least 4ha of land would be required, to establish an appropriate facility which further reduces the area land available, and further constrains economic viability; and
  - Alternative filling sources such as utilisation of stormwater runoff carry contamination risks and are therefore not feasible for an export crop; and
- Proximity of neighbouring sensitive land uses will mean any intensification activities on site are likely to be limited. Appropriate set back distances are required from the residential area and drains within the site to ensure compliance with agrichemical regulations, which in turn influence what can be achieved on site. As a minimum, regulations will require 10m with a full vegetated buffer or 20m without, creating a non - uniform shape within the available area, and further constraining useability. These set backs also mean that the viability of the site is tied to utilising all titles together.

When considered in terms of alternative forms of land based primary production and parcel amalgamation AgFirst considers that only limited high value horticultural crops could potentially achieve the minimum required EBIT range of $4,238.74 to $9,914.27 per ha for economic viability. To achieve returns of this level, the land based primary production activity must overcome the permanent and long-term constraints identified for the site. However, as no reasonably practicable solutions exist to address those constraints within the currently foreseeable 30-year time frame, AgFirst concludes the site does not meet the threshold for economic viability.

This Productive Capacity Assessment has evaluated a range of alternative options, including those outlined within Clause 3.10(2) of the NPS HPL, and considered the requirements of Clause 3.10(3). In assessing the Middle Road site, AgFirst notes:

- The proposal avoids any significant loss of productive capacity of highly productive land in the distraction (NPS-HPL Clause 3.10(1)(b)(i)) as the identified site has permanent and long-term constraints that impact its economic viability;
- The proposal avoids fragmentation of large and geographically cohesive areas of Highly Productive Land (NPS-HPL Clause 3.10(1)(b)(ii)) as the site is already fragmented via specified infrastructure and the proximity of urban development on 3 boundaries. The proposal recognises this and while the residual land will be reduced in area, it does not introduce any additional urban boundary, fragmentation, or constraints that are not already present; and
- The proposal avoids any potential reverse sensitivity effects on surrounding land based primary production (NPS-HPL Clause 3.10(1)(b)(iii)) as it does not introduce additional sensitive activities into the area. While the residual area will be smaller, there are already three sensitive landuse boundaries present.

2.0 Introduction

This Productive Capacity Report is submitted in support of CDL's Referral Application (**Application**) under the Fast-track Approvals Act 2024 (**FTAA**). The project is for the residential development of approximately 300 – 350 lots at 92, 108, 148 Middle Road and 139 Te Aute Road in Havelock North and is referred to as the 'Middle Road' project.

The purpose of this report is to determine the productive capacity of the site and assess the implications of the Middle Road project with respect to the National Policy Statement on Highly Productive Land (**NPS-HPL**) (Ministry for the Environment, December 2025), Plains Production Zone, and Versatile Land as detailed in the Hastings District Plan and the Hawke's Bay Regional Policy Statement. The assessment is based on an indicative concept plan, noting that detailed design will be undertaken as part of a future substantive application should the project be accepted for referral to the Fast-track process.

3.0 Description of Application Site

The application site is located at 92, 108, 148 Middle Road and 139 Te Aute Road in Havelock North (**site**). The site is held in four separate titles and consists of a combined area of approximately 30.6ha. The site is relatively flat and currently used for rural residential and grazing purposes with three existing dwellings. Figure 1 shows the site extent within the context of Havelock North.

Figure 1: Location and Extent of Site (Red Outline).

The site is on the southwest side of Havelock North, approximately 900m south of the town centre, which contains a range of retail and commercial uses. The wider land uses to the north, east and west of the site are predominantly suburban residential in character, with a retirement village to the northwest and larger rural landholdings to the southwest.

A separate 3.3ha rural residential landholding at 80 and 84 Middle Road, known as the McKenna Block, is located immediately to the east of the site adjacent to the Herehere Stream (Figure 1). This landholding is in separate ownership and does not form part of the application site at the time of lodgement. However, given the McKenna Block's proximity and relationship to the Middle Road site, the landholding has been considered at a high level within this assessment.

The Planning Overview Report and other technical assessments prepared to support the referral application under the FTAA provide a comprehensive description of the site and its context. With respect to matters relating to productive capacity and highly productive land, the following comments are made about the site and surrounds:

- It is located on the south western edge of Havelock North and shares a boundary on three sides with existing residential (sensitive) activities. The proximity of these activities constrains potential intensification of the site;
- The topography of the site directs overland flow and ponding into the centre of the site. Waterlogging and associated flooding implications constrain the productive capacity of the site; and
- While of a reasonable size if all title are amalgamated, limitations and constraints associated with the site have rendered its use economically unviable. Its viability is evident in its historic use patterns while limitations and constraints are detailed in Section 9 of this report.

3.1 Description of Proposal

The Middle Road project will provide for the residential subdivision of the site to enable the development of approximately 300 – 350 lots. The intended subdivision layout will provide for a range of lot sizes to enable conventional residential development along with medium density development opportunities. An indicative concept plan has been prepared to inform the referral application and is provided as Figure 2. The development is supported by integrated three-waters and transport infrastructure, together with an interconnected open space network.

A full description of the Middle Road Project is provided in the Planning Overview Report submitted in support of the Referral Application. The proposal and the matters addressed in this report are based on an indicative concept design prepared for referral purposes. Detailed design and refinement of will be undertaken as part of the substantive application process should the project proceed. For assessment completeness, this report has also had regard to a potential extension of the Middle

Road development across the adjoining McKenna Block (McKenna Block Extension at Figure 1).

Figure 2: Draft Concept Plan.

With respect to matters relating to productive capacity and highly productive land the project is summarised as follows:

- Residential redevelopment will permanently change the nature of the site and remove any potential primary production activity. While this results in a permanent change, the site is currently unable to support economically viable land based primary production when assessed against reasonably practicable methods across a 30 year horizon;
- The identified concept plan links existing residential activities from the Iona Subdivision, existing Havelock North residential area, and Ryman Healthcare James Wattie Retirement village. This provides a better delineation between wider primary production activities and residential activities by managing fragmentation and urban / rural transitions.

4.0 Current Landuse & Coverage

The site is currently utilised for a range of uses including:

- Rural residential activities with a primary dwelling and associated curtilage established within three lots ranging in size from 2,900m^2 to 4,300 m^2;
- A stormwater infiltration basin is being constructed across 1.39 ha at 122 and 148 Middle Road as part of the adjacent Iona subdivision and development; and
- Pastoral grazing is occurring within residual areas by leaseholders.

4.1 Topography

The site is predominantly flat, situated at 9.2m above mean sea level (AMSL) along the northern boundary at Te Aute Road. Contours direct surface water into the centre of the site (6m AMSL) with expected stormwater flows north east towards Karamu Stream. Survey data from Hastings District Council including spot heights are shown on Figure 3.

Figure 3: Site Topography (Hastings District Council Survey and Spot Heights).

4.2 Existing Consents

A review of the Hawke's Bay Regional Council consents database identifies that the only regional consent held for the site is within Lot 1 DP 600024 to carry out excavations within 6m of the Gilpin Drain in associated with the construction of the stormwater attenuation device.

Review of HBRC groundwater well database identifies eight groundwater wells as being presented within the site, all of which will be related to permitted takes for domestic / animal supply as no consents are held for irrigation.

4.3 Adjacent Landuses

Adjacent land uses are dominated by residential land use on three boundaries; North is occupied by the James Wattie Ryman Healthcare village, while east and west form the outer extents of Havelock North township. South transitions to mixed rural residential before transitioning to productive uses south of Gilpin Road.

5.0 Land Use Capability

Land Use Capability (LUC) mapping has characterised land into seven classes based on its long-term capability to sustain one or more productive uses based on its physical limitations and site-specific management needs. Productive capacity is dependent on physical qualities of the land, soil, and environment.

LUC maps from Hawke's Bay Regional Council and Manaaki Whenua place the piece of land under LU2 Class 2, defined as: "Arable. slight physical limitations, readily controlled by management and soil conservation practices. Suitable for cultivated

crops, berry fields, pasture, tree crops, or production forestry". Mapped LUC Classes are shown on Figure 4 below.

Review of detailed mapping identifies the LUC Class as 2w1, confirming wetness and waterlogging are the primary limitations identified within the site. AgFirst's opinion on the accuracy of this classification is addressed in Section 9.0 below.

Figure 4: Hawke's Bay Regional Council Landuse Capability Extents Showing Class 2 Classification across the Site.

6.0 Versatile Land

The Hawke's Bay Regional Policy Statement defines versatile Land as

> *contiguous, flat to undulating terrain within the Heretaunga Plains sub-region that acts collectively to support regionally (and nationally) significant primary production and associated secondary services on the Heretaunga Plains, based around:*
> *a) an exceptionally high proportion of versatile Class 1-3 soils (comprising almost 90%);*
> *b) Class 7 soils that are internationally recognised as having very high value for viticultural production (comprising almost 7%);*
> *c) its proximity to a cluster of national and international processing industries and associated qualified labour force; and*
> *d) its proximity to the Port of Napier and other strategic transport networks providing efficient transport of produce.*

This definition was updated to reference Canterbury Regional Council v Selwyn District Council [W142/96] where Environment Court Judge Treadwell identified a range of additional factors that should be taken into account, including:

> *Soil texture, soil structure, soil water holding capacity, soil organic matter stability, site's slope, site's drainage, temperature of the site, aspect of the site, storm water movements, flood plain matters, wind exposure, shelter planted, availability of irrigation water, transport (both ease and distance), effect of the use on neighbours, effects of the neighbours on use, access from the road, proximity to airport, proximity to port, supply of labour, quality of labour, previous cropping history, relevant contamination, sunlight hours, electricity supply, district scheme, and economic and resale factors.*

Within this determination, Judge Treadwell noted "*This list demonstrates the real relevance of the soil on its own. Obviously, one can have an extremely good soil which would be disqualified for a farming use by one of several of the factors above"*.

Objectives and policies with the Operative Hastings District Plan, Regional Resources Management Plan and Regional Policy statement focus on the protection of versatile land from inappropriate use, subdivision or development.

7.0 Hazards

Review of the Hawke's Bay Regional Council Hazard Portal has noted the following hazard risks to the piece of land:

- Medium Liquefaction vulnerability;
- High Risk of Earthquake Amplification; and
- Flood Risk.

7.1 Liquefaction & Earthquake Amplification

While liquefaction and earthquake amplification risks are common across productive soils of Hawke's Bay, their presence provides an additional risk layer to developing perennial horticultural enterprises within the site, primarily influencing:

1. Costs of development: requiring additional design specifications to ensure all shedding, office blocks, and permanent structures address building design requirements for appropriate factor of safety; and
2. Insurance costs: insurance premiums will factor into the risk layers identified for specific sites and will result in an increased premium compared to lower risk areas.

These two factors in and off themselves are not a determinant in identification and use of land, however AgFirst considers that they do influence economic viability and appetite for investment, particularly where other factors contribute to a site being considered marginal. Figures 5 and 6 below set out the liquefaction and earthquake amplification risk overlays respectively.

Figure 5: Medium (Orange) and Low (Yellow) Liquefaction Vulnerability Risks.

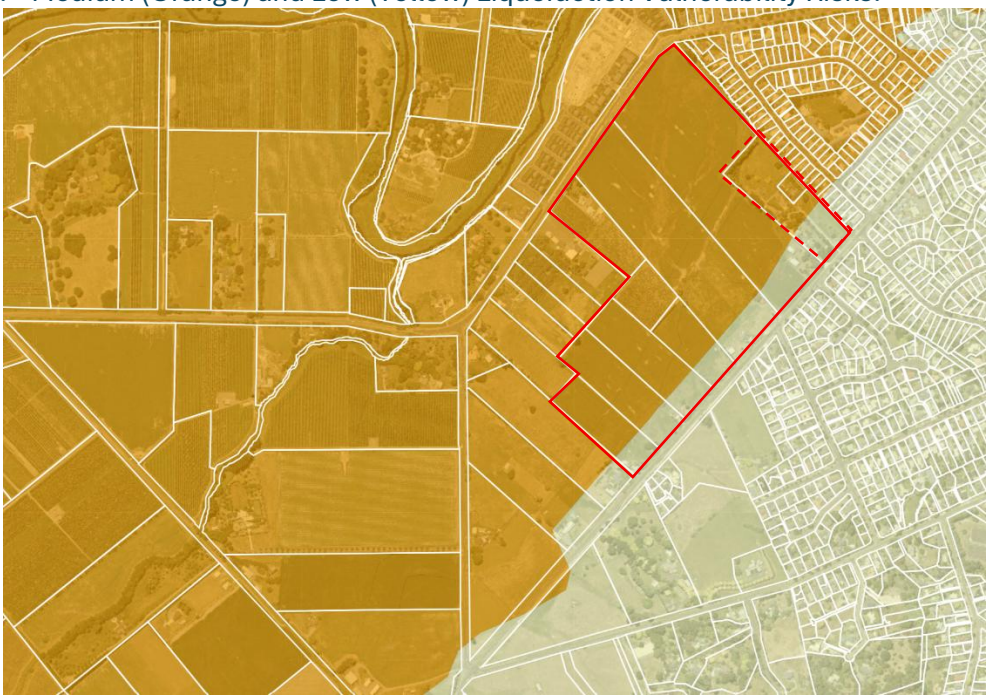
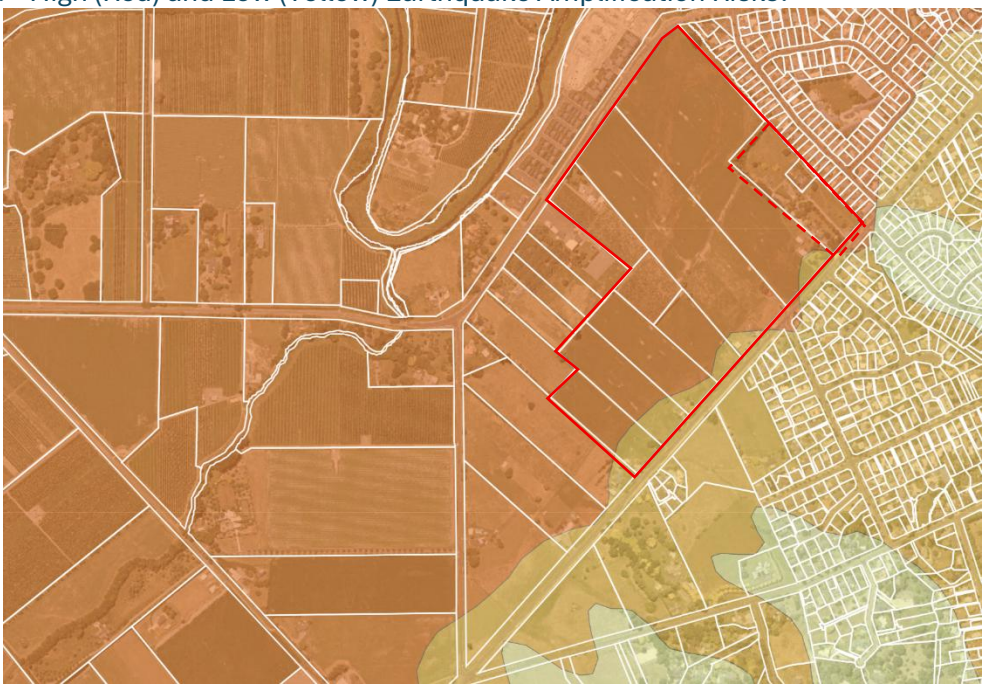


Figure 6: High (Red) and Low (Yellow) Earthquake Amplification Risks.

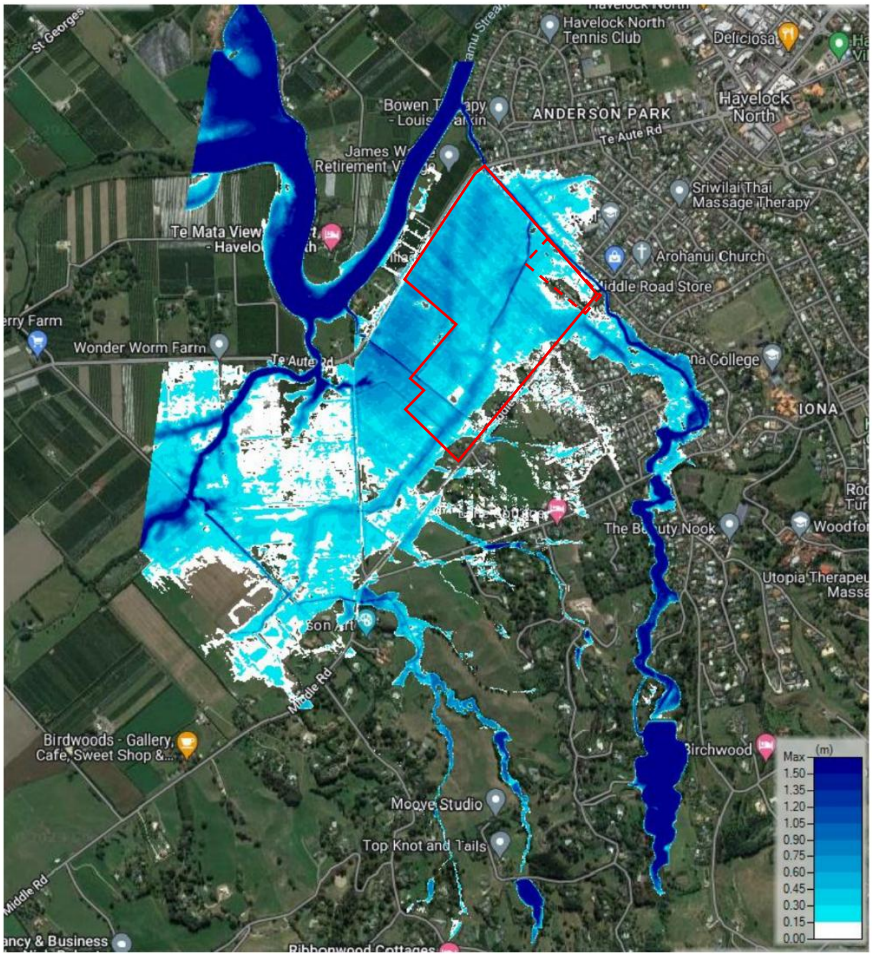


7.2 Flood Risk

Flood modelling undertaken by CKL NZ Ltd has been submitted to, and accepted by HBRC and Hastings District Council, identifying that except for a small area adjacent to Middle Road, nearly the full extent of the site is within a 1 in 100-year Annual Recurrence Interval (ARI) Flood Plain (Figure 7). Typically, LUC Class 2 land is categorised by 'Occasional Flood Flow' and while occasional is not defined in the LUC Handbook, the

characterisation of the site as being within a 1 in 100 ARI identify that frequent inundation of soils will occur, exceeding the expectation of 'occasional' as defined for LUC Class 2 soils.

Figure 7: 100 Year ARI Flood Modelling for the Site by CKL NZ Ltd.



8.0 Mapped Soils

Soil formations identified by Manaaki Whenua Landcare Research S-Maps show the convergence of Hastings_29a.1 (strong confidence), Ruataniwha_7a.1 (strong confidence), Hinds_92a.1 and Hinds_93a.1 soils (moderate confidence). Both Hastings_29a.1 and Ruataniwha_7a.1 are gley soils, strongly affected by waterlogging and as a result, have become chemically reduced. Both soils are poorly drained, have high structural vulnerability, and low N leaching potential. Water holding capacity is high, causing limited aeration in the rootzone and increasing drought susceptibility.

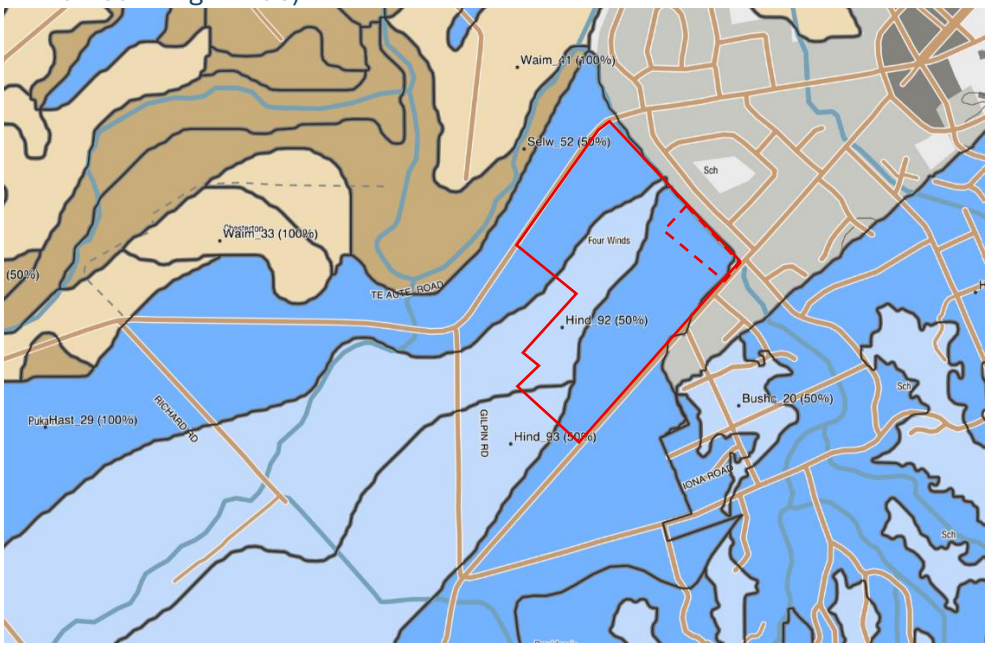
Both Hinds_92a.1 and Hinds_93a.1 soils are Mottled Fluvial Recent Soils, formed from hardstone parent material deposited by running water. Both Hinds soil types have

imperfect drainage and weakly developed soil structure, causing moderate vulnerability of water logging and high structural vulnerability. Nitrogen leaching potential is low and water holding capacity is high while aeration in the root zone is also limited.

Moderate confidence suggests that both Hinds soil formations could also be Patutahi_11a.2, also a Mottled Fluvial Recent Soil, sharing the same characteristics as Hinds_92a.1 and 93a.1 soils except for having additional gravel content and a restricted rooting depth to high density and / or high penetration resistant soils.

Primary constraints presented by the identified soil types for the site are water logging (caused poor, and imperfect drainage), limited aeration in the rootzone and high structural vulnerability. These constraints mean that the site has increased drought vulnerability due to the limited root zone as well poor winter growing conditions where wetness becomes the limiting factor. Drainage characteristics of the site are shown in Figure 8 below.

Figure 8: Landcare Research S-Maps Soil Drainage (Poorly Drained in Dark Blue, Imperfectly Drained in Light Blue).



9.0 Site Assessment

Additional known features regarding site specific conditions including groundwater monitoring and saffron thistle are set out in turn below.

9.1 Soil Profiles & LUC Mapping

In Categorising LUC Class 2 Land, The LUC Handbook notes category 2w1 is typically a slight wetness after drainage has occurred. For this specific site, AgFirst notes while surface drains are present, the contours and extent mean that they do not function

adequately, and therefore the land has not been sufficiently drained to meet the LUC Class 2 parameters.

Rather, the slow draining characteristics of the site coupled with the identified clay loam soil typology is consistent with category 3w1 where wetness persists after drainage. Paddock scale mapping would likely result in a large portion of the site area being re-classified as 3w1.

9.2 Groundwater Monitoring

HBRC manage a range of groundwater monitoring locations across the region, with Wells 16758, 15012, and 17492 being the closest locations to the site at 4.5km, 4.9km, and 3.6km respectively. Both Wells 15018 and 17492 are located within residential areas while Well 16758 is located within production land adjacent to stock road. While Well 17492 is closest to the site, it appears to be recently installed with data only available from August 2024 and Well 15012 has been drilled to a depth of 114m, connecting to the deeper underlying aquifer.

Well 16758 shows that the normal range for groundwater is up to 0.32m below ground level, dropping to 4.8m below ground level during dry conditions. While not site-specific data, soil typology and location suggests that similar conditions would occur on site. This pattern of winter wet to summer dry causes significant issues; winter water logging collapses soil profile and limits growth, which then in turn increases drought susceptibility from both a winter and summer perspective regarding water logging followed by drought susceptibility.

9.3 Saffron Thistle

Saffron thistle, an invasive thistle known to form dense stands and aggressively compete with crops, was identified on the properties located at 122 Middle Road (4.48ha) as part of the construction of the Stormwater Infiltration Basin.

Saffron thistle is a declared pest plant and requires control under the Regional Council Pest Management Plan. With respect to productive uses, the presence of Saffron thistle constrains its productive use via:

- Restricting the movement of stock between December and March unless travelling to slaughter or another saffron thistle infected property;
- Any hay/silage/stock feed or cropping activity must utilise the feed on the property itself – it cannot be moved to another location;
- Machinery used for cultivation, drilling, harvesting, and / or mowing must be cleaned thoroughly and inspected by a HBRC Biosecurity Advisor before leaving the paddock; and
- No soil is to be removed from site.

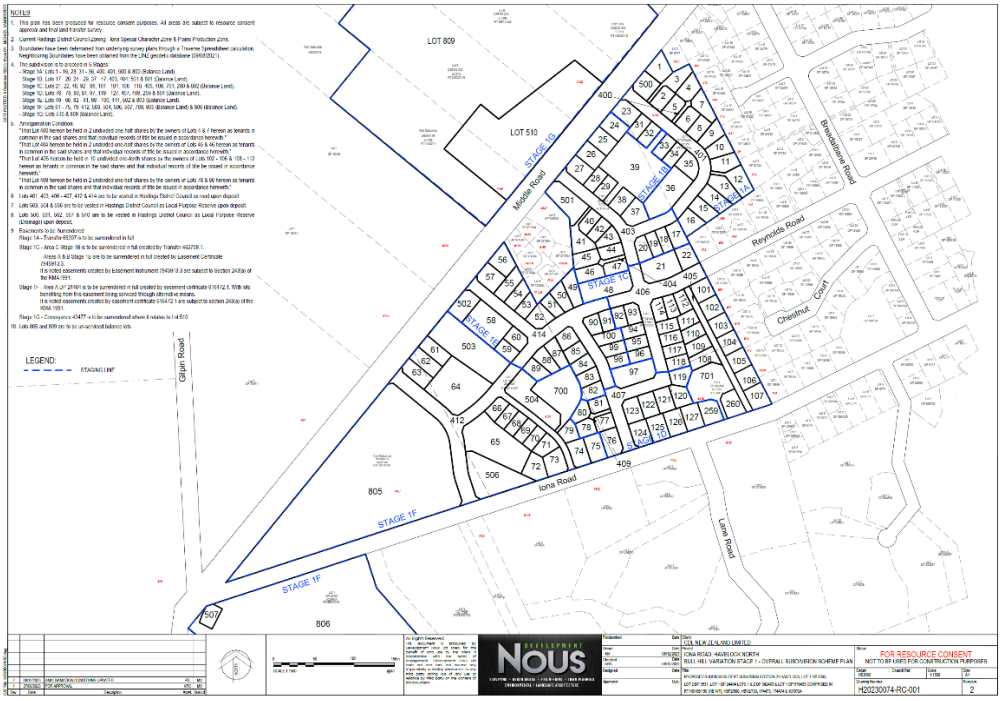
9.4 Iona Subdivision and Development

Subdivision and development have been approved, and are under construction, on the piece of land between Middle Road and Iona Road establishing further residential development in the area. This development extends the western edge of the existing urban boundary. As part of this, a drainage reserve (stormwater infiltration basin) is being constructed encompassing 1.39ha of land within the site. With respect to productive capacity, this development:

- Increases the urban nature of the surrounding environment, further increasing risks of reverse sensitivity issues; and
- Establishes specified infrastructure within 1.39 ha of the site with disturbance of 8.2ha required to facilitate development.

A copy of the consented plan is set out in Figure 9 below courtesy of Development Nous Ltd.

Figure 9: Consented Iona subdivision and Development Expanding the Urban Nature of the Surrounding Environment.



10.0 Productive Capacity Assessment

10.1 Highly Productive Land

Highly productive land (HPL) as defined by the NPS HPL is land that has been mapped by Regional Council as stipulated in NPS HPL Clause 3.4 and is:

- In a general rural zone or rural production zone;
- Is predominantly LUC 1, 2, or 3 land; and
- Forms a large and geographically cohesive area.

The piece of land under assessment is identified as LUC Class 2 land by HBRC and Manaaki Whenua and therefore must be assessed as HPL.

Productive Capacity of highly productive land is defined within the National Policy Statement for Highly Productive Land 2022 (December 2025) (NPS HPL) as:

> *in relation to land, means the ability of the land to support land-based primary production over the long term, based on an assessment of:*
> *(a) physical characteristics (such as soil type, properties, and versatility); and*
> *(b) legal constraints (such as consent notices, local authority covenants, and easements); and*
> *(c) the size and shape of existing and proposed land parcels*

In assessing the productive capacity of the site, AgFirst notes that while the site encompasses 30.6ha of title area, 5ha does not hold productive capacity on account of its existing uses for residential purposes and as the stormwater infiltration basin, both of which have permanently modified the land and mean that portion does not have productive capacity. This assessment therefore focusses on the remaining 25.6ha. This land is held in multiple titles and cant therefore either be utilised for individual enterprises within those parcels, or amalgamated into a larger lot.

With respect to the site, limitations regarding wetness are significant, while additional permanent and long-term constraints are present due to size, location, controlled weeds, and required set back distances from adjoining land uses.

The productive capacity of the site as defined by the NPS HPL is detailed in Section 10.1.1 to 10.1.6 below.

10.1.1 Current Landuse

At the time of this report, the residual 25.6 ha of the site is under pastoral grazing through a grazing agreement to maintain the land condition only. This is not a commercial farming arrangement.

Therefore, this landuse is a placeholder on account of the site's previous inclusion within the Heretaunga Plains Urban Development Strategy as a Greenfields Development site and expected development activities. Current market rates for pastoral lease are estimated to be $200/ha and as a result, shifting to a commercial lease method means a pastoral grazing lease is not considered financially viable as the earnings are insufficient to cover costs, let alone provide a financial return.

10.1.2 Constraints

In assessing the productive capacity of the site, AgFirst has identified permanent and long-term constraints including:

- Soil wetness and associated water logging combine to create limited aeration within the soil profile which in turn significantly constrains the productive capacity of the

site. In its current state, drainage is required to alleviate this limitation as without drainage, a very short window of an average growing season exists where soils are suitable for any productive purpose - in above average rainfall years, there is limited ability to utilise the site and in below average years, rooting depth will not be sufficient to provide drought resilience. In determining soil wetness and water table constraints, AgFirst has considered the following evidence:

- Visual Observation from AgFirst personnel and commentary from landowners
- CKL NZ Ltd Stormwater ARI modelling;
- Well logs; and
- Soil typology for the site, which records a very high-water holding capacity and a moderate permeability range, coupled with poor drainage characteristics. The clay and fine silt dominance contribute to standing water within the soil profile which will be extremely slow to move into the permanent groundwater table;

- To address soil wetness, land amelioration would be required via re-contouring / filling work or installation and operation of a subsoil drainage system. With respect to this site, land improvement is not considered an economically viable solution because:
  - Recontouring and importation of fill to correct drainage profiles is cost prohibitive, further preventing economic viability being achieved;
  - Sub-surface drainage systems need to convey water away from the soil profile being drained. For this site, the contours and surface drains direct water to the centre of the site, before overflowing into the Herehere Stream. To address this without contouring would necessitate a pumped system, increasing cost and complexity, and further constraining economic viability;
  - The stormwater infiltration basin being constructed is designed to collect stormwater runoff from the surrounding urban areas and discharge this via infiltration into the underlying soils and aquifer. Given the previously mentioned contours and expected capillary effects, the presence of the basin will mean soils stay saturated longer while the infiltration basin discharges its catchment; and
  - Runoff will still flow into the site from adjacent residential development, further constraining the ability to drain the site for high value production;
- No viable access to irrigation water is currently available. Without irrigation, there is no ability to undertake horticultural activities on the site to produce high value crops to overcome economic constraints. The Heretaunga Plains are currently considered over allocated, and AgFirst does not consider there is any reasonably practicable solution to access water for the site as:
  - Irrigation requirements for perennial horticulture or irrigated pasture require a rate and volume of take that cannot comply with the permitted activity thresholds. A permit is therefore inevitable regardless of regulatory reform;
  - Under the current and reasonably foreseeable regulations, a new consent for the take and use of water would be required and under TANK Plan Change 9, this is characterised as a prohibited activity under TANK Rule 12 as:
    - The application is for a new water take for areas not currently irrigated;
    - There are no water storage mechanisms available, meaning the discretionary thresholds of TANK 10 cannot be met;

- Any additional take from the Heretaunga Water Quantity Area exceeds the total allocation limit set out within Schedule 30; and
- The take is not for essential human health needs, nor is it for an unforeseeable non-commercial need, meaning the non-complying thresholds of TANK Rule 12 cannot be met.

- Onsite water storage solutions have been considered however storage would need to provide 206,784 m^3 of water storage to account for the Irricalc 95th percentile demand for crops in Hawke's Bay across 28.8 ha. At a depth of 5m, this requires 4.1 ha of land to be utilised, decreasing the economic viability of any enterprise. Regardless of design, on-site water storage is still not considered reasonably practicable as:
  - There is no identified mechanism for filling the storage pond as rainfall in and of itself is not sufficient. Without allocation to fill the reservoir, it is ineffectual;
  - Utilising stormwater runoff from residential areas may provide appropriate volume, however the increased risks from contamination mean this option is not considered viable. If contamination were to occur, this would compromise the crop for any given year, and further implicate economic viability; and
  - In AgFirst's experience, the cost of on-site water storage mechanisms only justify the cost where land values are low.
- The NPS-HPL envisages a 30-year timeframe in assessing the nature of limitations for the site. Using this time horizon, AgFirst notes there are no reasonably foreseeable solutions for the site that can be considered reasonably practicable. A range of solutions are under pre-feasibility investigation, however waiting an unknown time for additional allocation at an unknown cost is not economically viable, nor is it reasonably practicable;

- The site is already fragmented across 8 parcels, including residences and the stormwater infiltration basin, and further constrained by the presence of urban landuse on three boundaries; and
- While common to Hawke's Bay growing areas (and can be overcome), earthquake amplification, and liquefaction are recorded for the site. In this instance, AgFirst considers that these factors will be considered within the risk decision matrix as it relates to the expected internal rate of return and associated economics of investment. Cost of production is a current central focus within the primary industry and the further inflationary pressures, such as those caused by increasing insurance premiums (30% increases in the 18 months to September 2024[1]) are likely to decrease risk appetite for a site where a loss of crop could occur; and

These constraints represent permanent and long-term constraints on productive capacity, that are unlikely to be resolved within a 30-year timeframe.

[1] https://www.theprofit.co.nz/rising-insurance-costs-and-difficulty-getting-cover-especially-in-flood-prone-areas/

10.1.3 Permanent and Long-Term Constraints Versus Alternative Forms of Land Based Primary Production

Given the climatic conditions, soil, and existing infrastructure, cropping / arable landuse is considered the most likely scenario for land based primary production, and for any economic viability (Economic viability is discussed in Section 10.4 below) to be met, this would require:

- Securing of Water rights;
- Amalgamation of all parcels within the assessed site;
- Land improvement via augmentation and drainage to address wetness;
- Enhancement of access to provide for machinery ingress and egress; and
- Ensuring appropriate set back distances from the stormwater drains, residential and property boundaries are utilised within the proposed planting plan.

With regards to alternative forms of land based primary production, AgFirst considers all known forms of land based primary production will remain subject to the constraints identified. In reaching this conclusion, AgFirst has considered:

- Perennial horticulture enterprises including pip-fruit, summer fruit, berries, and medicinal herb species (i.e. calendula & echinacea);
- Pastoral farming (including leasehold);
- Dairy farming;
- Production Forestry; and
- Glasshouse produce production.

Specifically, these forms of primary production will suffer constraints as:

- All perennial horticulture, dairy farming, and glasshouse production activities will require appropriate water allocation for irrigation. At the time of preparing this report, there is no reasonably practicable solution for obtaining sufficient allocation. No projects have progressed past feasibility, and therefore while a 30-year timeframe must be considered under the NPS-HPL, unknown options at unknown costs that are more than 5 years away from realisation cannot be considered reasonably practicable;
- The total land area of 25.6ha is insufficient to support viability for sheep and beef, dairy, or production forestry in their own rights and insufficient land is immediately available to be amalgamated into such enterprises;
- Perennial horticulture requires drainage as a land management improvement strategy, and this requires water to be conveyed off site and away from the active rooting zone of the plant. Currently, the full extent of the site is subject to ponding and flooding at a 1 in 100-year ARI, with the open drains present not able to convey water away. Any pumped solution would need an easement and associated consents to either discharge into the Karamu Stream, subject to all necessary consents and permissions, or undertake significant earthworks to enable the use of

the Herehere Stream on the north eastern boundary. These solutions are expensive and further constrain economic viability, and any option that creates displacement of flood waters requires detailed assessment to ensure it is a viable solution that does not cause impacts to neighbouring properties;

- Current soil typology and conditions identified show high structural vulnerability, limiting the winter use of the site to prevent structural damage to soil horizons. This, coupled with dry matter production constraints in the absence of irrigation for the Hawke's Bay Climate determine dairy is not a feasible option;
- Production forestry is generally not undertaken in proximity to residential land uses because of reverse sensitivity effects and required setback distances. That is, production forestry requires:
  - 10m setback from all site boundaries;
  - 20m set back from any other zone; and
  - 10m setback from all waterbodies.

  These set back requirements, coupled with the primary constraints of water logging and flooding prevent the site from being utilised for production forestry as a standalone enterprise;
- Significant land augmentation would be required to engineer the construction of glasshouses on site to address flooding, earthquake, and liquefaction risks for the site. While these solutions can be engineered, this represents a significant increase in capital investment for a site suffering wider constraints; and
- At the time of completing this report, AgFirst is not aware of any other alternative form of land based primary production that would be suited to the identified permanent and long-term constraints of the site.

10.1.4 Economic Viability

Economic viability of highly productive land can be considered the ability of that endeavour to survive; that is its ability to generate economic benefits exceeding its economic costs. Review of Hastings District Council (HDC) rating assessments for the parcels identifies that HDC have assessed land value as ranging between $395,500 and $717,755 per hectare across the parcels. AgFirst notes this is not considered representative of Plains Production land value in the current market, rather this indicates rateable value is being assessed based on other property economic factors, such as urban potential due to its previous inclusion in the Heretaunga Plains Urban Development Strategy.

For the purpose of this Productive Capacity Assessment, assuming all titles were amalgamated to operate together, and assuming land values range between $150,000 and $395,500 per ha, rating levies across 25.6 ha of productive land are estimated to range between $31,711.92 and $53,644.76. Assuming a debt loading of 40% against long term average interest rates, a horticultural enterprise would need to achieve EBIT between $4,238.74 and $10,005.49 per ha.

At 2024 costs and returns[2], AgFirst Notes:

- Lease operations are not economically viable as market lease rates do not achieve these levels;
- Maize and fodder crops do not achieve average returns high enough to be economically viable;
- Pipfruit average returns for 2024 are not economically viable;
- Viticultural returns for 2024 are not economically viable;
- Typical rotational cropping endeavours do not achieve economic viability;
- Returns for production forestry would not meet viability due to the timeline from planting to harvest; and
- The total land area available (25.6ha) is insufficient to run an economically viable sheep and beef operation where typically 150-200ha forms the minimum viable business unit.

Based on the above uses, a level of income may be achieved from those enterprises without a return on wages and management costs. Those enterprises would be reliant on an outside source of income to survive and are therefore not economically viable.

Higher value horticultural enterprises, namely kiwifruit and summerfruit, achieve costs and returns sufficient to meet the threshold for economic viability, however these require the permanent and long-term constraints to be overcome to achieve that success. Namely:

- A reliable supply of irrigation water is required, at a volume and rate sufficient to enable irrigation of high value crops;
- Land augmentation via drainage and flood mitigation are required to address flood risk and soil constraints to be able to achieve horticultural success; and
- Given the existing presence of residential zoned land on three boundaries, measures and mitigations would be needed to address interface with those existing sensitive users. Developing the block into an intensive horticultural operation will generate issues with sensitive landuse and will require mitigation measures. These measures (such as increased offset distances) would limit the intensity of use of the site and in turn the returns able to be achieved.

As has been identified in other sections of this report, achieving water security for irrigation is not considered practicable within the current resource constraints and no feasible alternative has been identified with sufficient certainty. Similarly, three sides of the subject site are in residential configuration, which changes the expected environment from primary production to residential. There is no practicable option to address the presence of urban development and, as discussed above, this has implications for the intensity of horticulture able to be achieved onsite and therefore the returns able to be achieved. Land augmentation strategies to address drainage are either cost prohibitive for primary production or are required to implement a pumped

[2] The most up to date data available at the time of this report.

strategy that addresses displacement of flood volumes to ensure neighbouring landuses are not impacted. When this is coupled with the other constraints, it further prevents viability being achieved.

Based on the above estimations, the area under assessment, the economic viability threshold is not met.

10.2 Versatile Land

The Middle Road Project site does not meet the definition of Versatile Land as defined in the Regional Policy Statement (refer Section 6) due to numerous additional factors that prevent the site from being utilised viably including:

- Economic and resale factors;
- Drainage;
- Effects of the use on neighbours;
- Effects of the neighbours on use, particularly intensified use;
- Storm water movements;
- Availability of irrigation water; and
- Flood plain matters.

These disqualifications have been identified as constraints and limitations within this report and mean that the site cannot support significant primary production as required under the RPS definition.

11.0 Regulatory Assessment

The National Policy Statement for Highly Productive Land (NPS-HPL) (Ministry for the Environment 2022) was approved by the Governor-General in September 2022, and subsequently amended in August 2024 and December 2025. Its objective states:

> *Highly Productive Land is protected for use in land-based primary production, both now and for future generations.*

To achieve this objective, nine policies are included to recognise productive land as a finite resource, map and identify highly productive land in an integrated way, prioritise and support highly productive land to be used for land-based primary production, reverse sensitivity effects are managed and ensure that urban rezoning is avoided except as explicitly provided for within the policy statement. This includes avoiding rezoning and development of highly productive land for rural residential land use, subdivision of highly productive land is avoided, and highly productive land is protected from inappropriate use and development.

In this instance, the proposal is to provide for the future subdivision and development of an area mapped as Land Use Capability Class 2 soils for non-land based primary

productive uses, meaning the requirements for exemption Clause 3.10 of the NPS HPL must be met. Clause 3.10 states:

> *(1) Territorial authorities may only allow highly productive land to be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 if satisfied that:*
>
> *(a) there are permanent or long-term constraints on the land that mean the use of the highly productive land for land-based primary production is not able to be economically viable for at least 30 years; and*
>
> *(b) the subdivision, use, or development:*
>
> *(i) avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and*
>
> *(ii) avoids the fragmentation of large and geographically cohesive areas of highly productive land; and*
>
> *(iii) avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development; and*
>
> *(c) the environmental, social, cultural and economic benefits of the subdivision, use, or development outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.*
>
> *(2) In order to satisfy a territorial authority as required by subclause (1)(a), an applicant must demonstrate that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land, by evaluating options such as (without limitation):*
>
> *(a) alternate forms of land-based primary production*
>
> *(b) improved land-management strategies: alternative production strategies:*
>
> *(c) water efficiency or storage methods:*
>
> *(d) reallocation or transfer of water and nutrient allocations:*
>
> *(e) boundary adjustments (including amalgamations):*
>
> *(f) lease arrangements.*
>
> *(3) Any evaluation under subclause (2) of reasonably practicable options:*
>
> *(a) must not take into account the potential economic benefit of using the highly productive land for purposes other than land-based primary production; and*
>
> *(b) must consider the impact that the loss of the highly productive land would have on the landholding in which the highly productive land occurs; and*
>
> *(c) must consider the future productive potential of land-based primary production on the highly productive land, not limited by its past or present uses.*
>
> *(4) The size of a landholding in which the highly productive land occurs is not of itself a determinant of a permanent or long-term constraint.*
>
> *(5) In this clause:*
>
> *landholding has the meaning in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020*
>
> *long-term constraint means a constraint that is likely to last for at least 30 years.*

In assessing whether the site under investment meets the threshold for exemption from the NPS HPL under Clause 3.10(1)(a), AgFirst has assessed the reasonably practicable options to retain the productive capacity of the area, noting:

- Alternative forms of land based primary production do not address the permanent and long-term constraints identified for the site;
- Improved land management strategies to ameliorate the absence of any available water alongside constraints of waterlogging and drought susceptibility are not considered reasonably practicable;
- Alternative production strategies would not address issues presented by this site which will limit the intensity of production due to existing urban interfaces;
- Water efficiency and water storage do not address the fundamental lack of available allocation as:
  - Water efficiency measures first require allocation availability. As no allocation is available, there are no water efficiency measures which could be implemented to address this issue;
  - Water storage requires a mechanism for filling the storage scheme in the first instance. The over allocation of Heretaunga water resources means no reasonably foreseeable mechanism is available to fill a storage reservoir;
  - Reallocation of water requires an excess of water to be available from an alternative location. Current HBRC policy under TANK Plan Change 9 is seeking to halve the total allocation provided to irrigators across the Heretaunga Plains, creating protectionism and conservatism within water users. Given the likelihood of significant reductions across water users, any excess allocation will be utilised on other swathes of productive land that do not have the same constraints as this land under assessment. There is no indication this position is likely to change, or the issue to be resolved over the short, medium and long term. Waiting an unknown time for an unknown solution, at an unknown cost does not meet the practicable threshold; and
  - The current regulatory framework prohibits any new allocation from being established and implements a backward looking framework that limits productivity to levels achieved at 2 May 2020. No future allocation will be available under this process and no alternatives have been progressed to a level that provides any certainty;
- Boundary adjustments and amalgamations have been considered in assessing the economic viability of a range of primary production activities on site. These do not change the permanent and long-term constraints identified; and
- Lease agreements will not be economically viable under the range of rates utilised for a range of lease opportunities that could reasonably be foreseen for the site.

12.0 Conclusion

CDL Land New Zealand Ltd are seeking referral under the FTAA to undertake residential development across the five titles located at 92, 108, 148 Middle Road and 139 Te Aute Road in Havelock North with potential inclusion of the McKenna Block at 80 – 84 Middle Road being considered.

Assessment of the productive capacity of this area has identified that an area of 25.6 ha is considered to be highly productive land under the transitional mapping provisions

while the remaining 5 ha of the site does not have productive capacity due to its high levels of modification for residential and specified infrastructure purposes.

Permanent and long-term constraints that prevent the land from being utilised for economically viable land based primary production activities.

The site suffers from wetness and regular flood events, and does not hold any water allocation rights, providing permanent and long-term constraints on its use for land based primary production. When these factors are coupled with the existing reverse sensitivity constraints from fragmentation and surrounding residential development, the site is not considered to meet the economic viability test threshold. Therefore, while mapped as highly productive land under the interim mapping protocols:

- the site has permanent or long-term constraints that mean the use of the highly productive land for land-based primary production cannot be economically viable for at least 30 years;
- the proposal avoids any significant loss of productive capacity of highly productive land in the district, and avoids the fragmentation of large and geographically cohesive areas of highly productive land; and
- The site does not meet the definition of versatile land when assessed against all factors that contribute to versatility.

13.0 References

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14.0 Limitations

The conclusions and all information in this report are given strictly in accordance with, and subject to the following limitations and recommendations:

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4. This Report was prepared on the dates and times as referenced in the report and is based on the conditions encountered on the site and information reviewed during the time of preparation. Accordingly, no responsibility is accepted for any changes in site conditions or in the information reviewed that have occurred after the periods of time referenced.
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