Broadhectare study 2015 profile
Mackay, Isaac and Whitsunday Region

Introduction

The Broadhectare study identifies the location and quantifies the area, timing of development and dwelling yield of larger land parcels to house future population. The land identified is known as broadhectare and represents unconstrained residential land supply under the planning scheme and development approvals.

Land stock

The total area of broadhectare available in the Mackay, Isaac and Whitsunday Region (hereafter referred to as MIW) is 5,806 hectares, representing a small percentage of the total land area of MIW (Tables 1 and 2).

Broadhectare can be further classified as follows:

- urban residential broadhectare — 3,358 hectares
- rural residential broadhectare — 2,448 hectares.

The study refers to 'rural residential' development as yielding three dwellings or less per hectare, or as otherwise described in the planning scheme.

Development at 'standard urban density' or 'higher density' is classified as yielding between 4 to 20 dwellings and greater than 20 dwellings per hectare respectively.

Dwelling yield

Table 2 shows ‘theoretical dwelling yield’ (the potential number of dwellings that could be built based on the identified land stock) and ‘expected dwelling yield’ (which takes into account factors affecting development of land such as ownership and land fragmentation).

The main points from Table 2 are:

- Broadhectare is likely to yield approximately 34,300 dwellings.
- Rural residential development is only a minor component of the total expected dwelling yield.
- Development at standard urban density will account for 79 per cent of the total expected dwelling yield.
The broadhectare stock in MIW is contained primarily within land parcels greater than 10 hectares in area (Table 3). For all broadhectare parcels, the difference between the overall parcel area (7,338 hectares) and the area available for development (5,806 hectares) indicates that some parcels are affected by physical or environmental constraints. The main points from Table 3 include:

- Residential stock is contained within 2,975 land parcels.
- Parcels less than or equal to 1.2 hectares account for over 9 per cent of all parcels.
- Parcels sized 10 hectares or more account for 73 per cent of the expected total dwelling yield from broadhectare land.

### Table 3: MIW broadhectare stock composition (a)

<table>
<thead>
<tr>
<th>Parcel size categories (hectares)</th>
<th>Land parcels (number)</th>
<th>Total area of parcels (hectares)</th>
<th>Broadhectare area (hectares)</th>
<th>Expected dwelling yield (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban residential (b)</td>
<td>Rural residential (b)</td>
</tr>
<tr>
<td>&lt;= 1.2</td>
<td>270</td>
<td>159</td>
<td>138</td>
<td>29</td>
</tr>
<tr>
<td>1.3–2.0</td>
<td>232</td>
<td>419</td>
<td>98</td>
<td>290</td>
</tr>
<tr>
<td>2.1–4.9</td>
<td>201</td>
<td>609</td>
<td>269</td>
<td>276</td>
</tr>
<tr>
<td>5.0–9.9</td>
<td>65</td>
<td>429</td>
<td>211</td>
<td>206</td>
</tr>
<tr>
<td>10.0+</td>
<td>165</td>
<td>5,722</td>
<td>2,638</td>
<td>1,647</td>
</tr>
<tr>
<td>Total</td>
<td>933</td>
<td>7,338</td>
<td>3,358</td>
<td>2,448</td>
</tr>
</tbody>
</table>

(a) Components may not sum exactly to totals due to rounding.
(b) Includes dwellings at higher and standard urban densities.

### Stock composition

The broadhectare stock in MIW is contained primarily within land parcels greater than 10 hectares in area (Table 3). For all broadhectare parcels, the difference between the overall parcel area (7,338 hectares) and the area available for development (5,806 hectares) indicates that some parcels are affected by physical or environmental constraints. The main points from Table 3 include:

- Residential stock is contained within 2,975 land parcels.
- Parcels less than or equal to 1.2 hectares account for over 9 per cent of all parcels.
- Parcels sized 10 hectares or more account for 73 per cent of the expected total dwelling yield from broadhectare land.

### Population capacity

The preliminary estimated resident population of MIW at 30 June 2014 was 182,000 persons (Source: ABS 3218.0). This is expected to increase to between 221,900 (low series) and 253,600 (high series) persons by 2026, representing population growth over the 2014–2026 period of between 39,900 (low series) and 71,600 (high series) (Source: Queensland Government Population Projections, 2013 edition).

The average household size for occupied private dwellings in MIW at the time of the 2011 Census was 2.8 and 1.9 persons for houses and attached dwellings respectively. Table 4 shows that depending on average household size, broadhectare development could accommodate between 78,000 and 105,400 persons. Further development in existing residential areas, where the parcel size is less than 2,500 m², could also accommodate additional population.
Total potential dwelling yield

Land ownership and fragmentation are potential constraints to residential development, and adjustments have been made to the broadhectare stock by applying potential development rates to land parcels. Furthermore, existing vacant residential land stock below 2,500 m² has been added to the broadhectare supply. Broadhectare residential land supply based on these components indicates a total potential dwelling yield of approximately 36,900 dwellings (See Table 5).

It is important to note that this dwelling yield does not include dwellings that would have been achieved through infill and redevelopment of smaller parcels below the broadhectare model threshold of 2500 m².

Dwelling demand

Evidently, not all future dwelling demand will be met through development of broadhectare land. Nevertheless, an indicator of the adequacy of supply of residential land (broadhectare and vacant lots) can be calculated by comparing the total supply as indicated above with future demand.

To make an assessment of future demand and determine whether there is adequate supply of residential land, three scenarios of dwelling projections have been used based on the Queensland Government’s population projection series — low, medium and high. Figure 1 and Table 5 show, based on these scenarios, the amount of land supply in terms of years remaining.

Table 4  MIW population yields based on a range of household sizes (persons) (a)

<table>
<thead>
<tr>
<th>Development type</th>
<th>Number of dwellings</th>
<th>Household size (average persons per household)</th>
<th>Possible population yield</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Rural residential</td>
<td>2,230</td>
<td>5,352</td>
<td>5,798</td>
</tr>
<tr>
<td>Standard urban density residential</td>
<td>27,220</td>
<td>65,328</td>
<td>70,772</td>
</tr>
<tr>
<td>Higher density residential</td>
<td>4,851</td>
<td>7,277</td>
<td>8,247</td>
</tr>
<tr>
<td>Total</td>
<td>34,301</td>
<td>77,957</td>
<td>84,817</td>
</tr>
</tbody>
</table>

(a) Count of all persons enumerated in the dwelling on census night, including visitors from within Australia. Excludes usual residents who were temporarily absent on census night.
Table 5 also shows that developed land parcels that are vacant account for approximately 7 per cent of the total potential dwelling yield from broadhectare land.

### Table 5  MIW broadhectare supply scenarios

<table>
<thead>
<tr>
<th>Dwelling production scenario (a)</th>
<th>Demand for residential lots</th>
<th>Supply - Stock of residential lots</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dwellings required to 2036 (b)</td>
<td>Broadhectare dwelling yield (c)</td>
</tr>
<tr>
<td>Low trend</td>
<td>32,767</td>
<td>34,301</td>
</tr>
<tr>
<td>Medium trend</td>
<td>40,486</td>
<td>34,301</td>
</tr>
<tr>
<td>High trend</td>
<td>49,026</td>
<td>34,301</td>
</tr>
</tbody>
</table>

(a) Based on dwelling projection levels produced in 2013.
(b) Dwellings required to 2036 based on Queensland Government household and dwelling projections, 2013 edition.
(c) Adjusted to take into account the propensity of development.
(d) Estimate of vacant residential parcels at January 2015.
(e) Supply of residential lots.
(f) Illustrative only, if no development occurs outside of broadhectare land.

**n.a** Supply beyond projection range

### Conclusion — MIW Region

The study has estimated that the total area of broadhectare available for residential development is 5,806 hectares. If this land were fully developed it has the potential to yield approximately 34,300 dwellings and accommodate 91,700 persons, using current average household sizes.

Based on current medium series household projections and the expected broadhectare dwelling yield, the available residential land stock indicates approximately 19 years of supply.