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## Region of Peel

### PHASE 2 - Screening of Mineral Aggregate Resources in the Focus Study Area

Conducted to inform the

Settlement Area Boundary Expansion (SABE)

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BUILDING COMMUNITY THROUGH PLANNING



**PHASE 2 - Screening of Mineral Aggregate Resources  
in the Focus Study Area**

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## List of Acronyms

**SABE** - Settlement Area Boundary Expansion

**Growth Plan** – “A Place to Grow, Growth Plan for the Greater Golden Horseshoe” 2019

**Hemson** – Hemson Consulting Ltd.

**FSA** - Focus Study Area

**Phase 1 Report** - Phase 1 Screening of Mineral Aggregate Resources in the Focused Study Area

**ROP** - Regional Official Plan

**COP** - Town of Caledon Official Plan

**CHPMARA** - Caledon High Potential Mineral Aggregate Resource Area

**CHPMARA Humber 10** - Reserve Lands (Sand and Gravel) #10 - Humber Resource Area

**HPMARA** - High Potential Mineral Aggregate Resource Area

**ARIP 165 – Revised 2009** - Aggregate Resource Inventory Paper

**ARIP** - Aggregate Resource Inventory Papers

**PPS** – Provincial Policy Statement

**NRR Manuals** - Non-Renewable Resources Training Manual

**MMAH** - Ministry of Municipal Affairs and Housing

**MNRF** - Ministry of Natural Resources and Forestry

**MNDM** - Ministry of Northern Development and Mines

**ORMCP** - Oak Ridges Moraine Conservation Plan

**GNHS** - Greenbelt Natural Heritage System

**OGS** - Ontario Geologic Survey

**CCRS** - Caledon Community Resources Study

**NEP** – Niagara Escarpment Plan

**ANSI's** - Areas of Natural and Scientific Interest

**ARA** - Aggregate Resources Act

**MTS** - Major Transit Station

## PHASE 2 - Screening of Mineral Aggregate Resources in the Focus Study Area

### 1. Background

#### 1.1. Study Purpose

The Region of Peel is currently undertaking a series of studies to inform the future Settlement Area Boundary Expansion (SABE) for growth allocated to the Region of Peel in “A Place to Grow, Growth Plan for the Greater Golden Horseshoe” 2019. (Growth Plan). After accounting for intensification opportunities across Peel, there will be a need for new lands to accommodate population and employment growth in the Town of Caledon to 2051. The SABE study, being undertaken by Hemson Consulting Ltd. (Hemson), will recommend the appropriate location(s) for the additional community (residential) and employment lands in the Town of Caledon, based on the results of a series of technical studies.

In the initial phase of the SABE study, Hemson identified an area of approximately 8,000 hectares as the most appropriate area for expansion to occur. This area, referred to as the Focus Study Area (FSA), is shown on **Figure 1**.

Under Provincial policy, settlement area boundary expansions are allowed at the time of a municipal **comprehensive review**<sup>1</sup>, if it can be demonstrated that certain criteria are met. Amongst the criteria to be met are a number related to the protection of **mineral aggregate resources** as defined in Provincial policy. Therefore, as input into the Settlement Area Boundary Expansion study, a “**Phase 1 Screening of Mineral Aggregate Resources in the Focused Study Area**” (Phase 1 report) was completed by Planscape to assist in determining the most appropriate location for the proposed SABE. This review responded specifically to Section 2.5.2.5 of the Provincial Policy Statement (PPS) 2020 which states:

In known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:

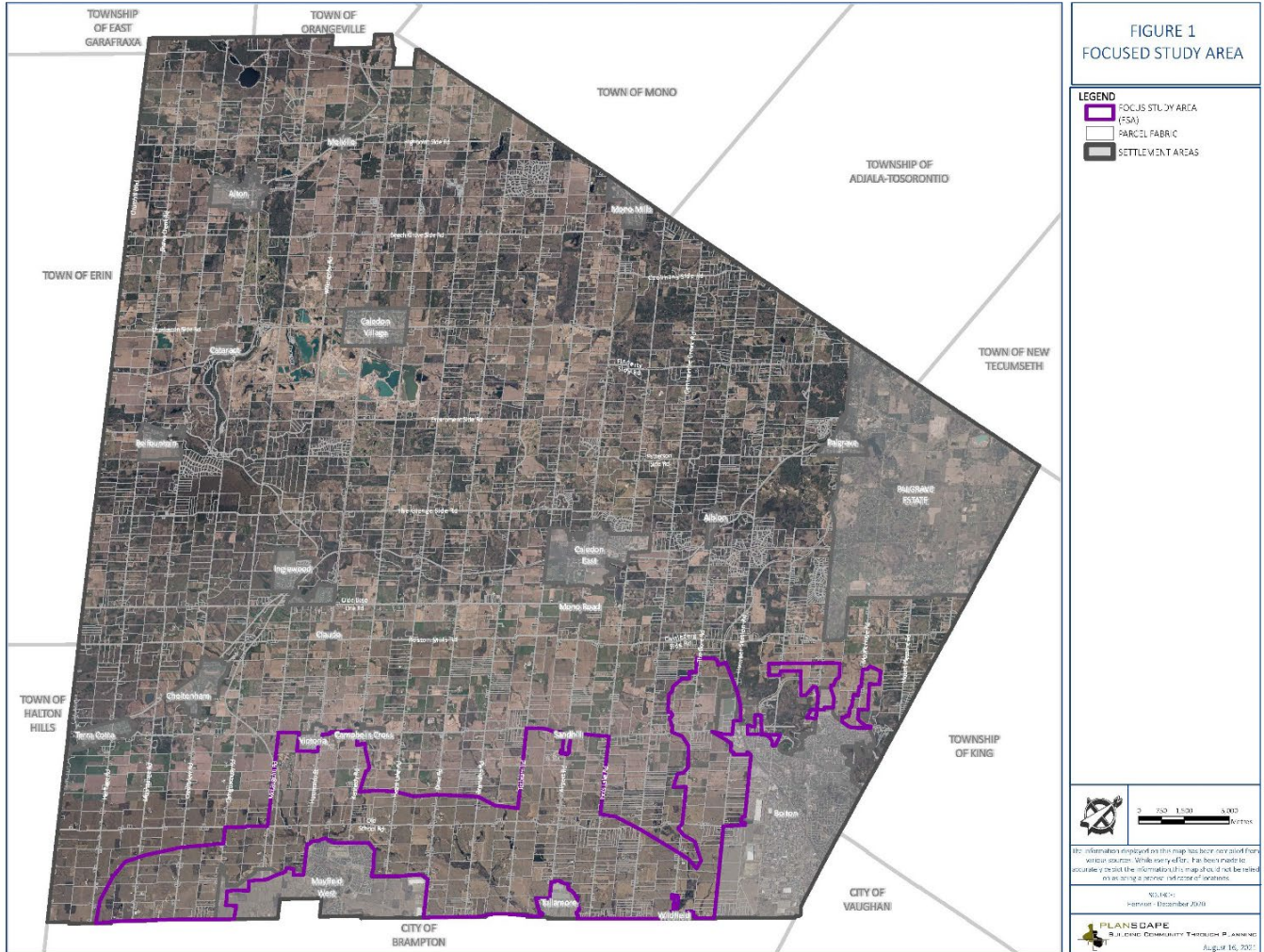
- a) resource use would not be feasible; or
- b) the proposed land use or development serves a greater long term public interest; and
- c) issues of public health, public safety and environmental impact are addressed.<sup>2</sup>

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<sup>1</sup> All bolded terms in this report are defined terms in the PPS 202 or the Growth Plan 2019.

<sup>2</sup> Provincial Policy Statement 2020, Section 2.5.2.5 pg. 29.

**Figure 1 - Focus Study Area; Source: Hemson**

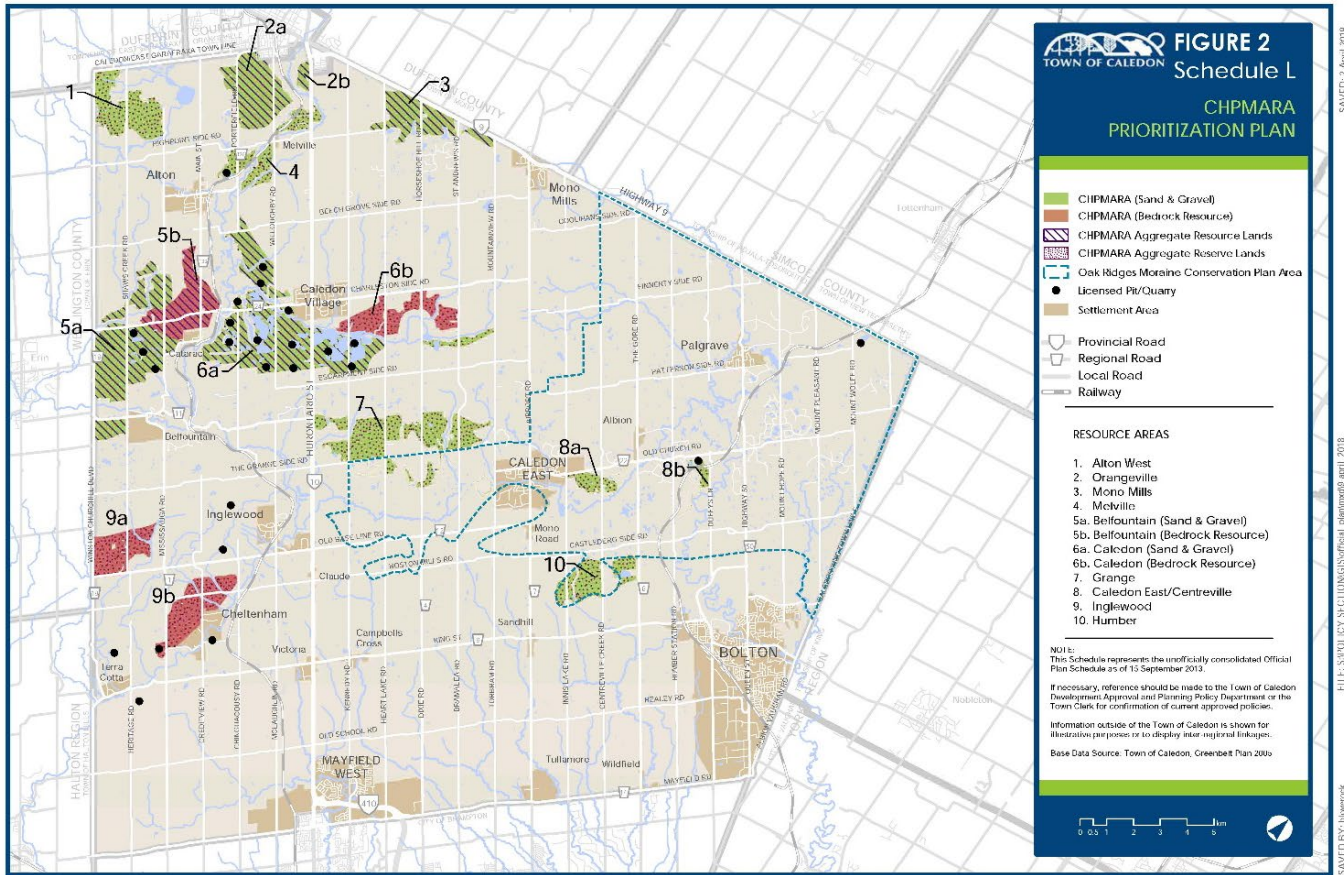


The screening of the FSA as documented in the Phase 1 report, confirmed that one of the potential locations for a settlement area boundary expansion might encroach into lands identified in the Regional Official Plan (ROP) as High Potential Mineral Aggregate Resource Area (HPMARA) and the associated buffer area. Specifically, the lands of concern are identified in the Town of Caledon Official Plan (COP) as Caledon High Potential Mineral Aggregate Resource Area (CHPMARA) Reserve Lands (Sand and Gravel) #10 - Humber Resource Area (CHPMARA Humber 10) on Schedule L to the COP (**Figure 2**)<sup>3</sup>. This deposit has been identified as a sand and gravel resource deposit of secondary significance and was re-confirmed in the Aggregate Resource Inventory Paper (ARIP 165 – Revised 2009) for the Region of Peel<sup>4</sup>.

<sup>3</sup> Referred to in this report as CHPMARA Humber 10.

<sup>4</sup> Golder Associates Ltd. And Rowell, D.J. 2009. Aggregate Resources Inventory of the Regional Municipality of Peel, Southern Ontario; Ontario Geological Survey, Aggregate Resources Inventory Paper 165–Revised, pg. 57.

**Figure 2 – CHPMARA Prioritization Plan (Schedule L);** Source: Town of Caledon Official Plan, 2013



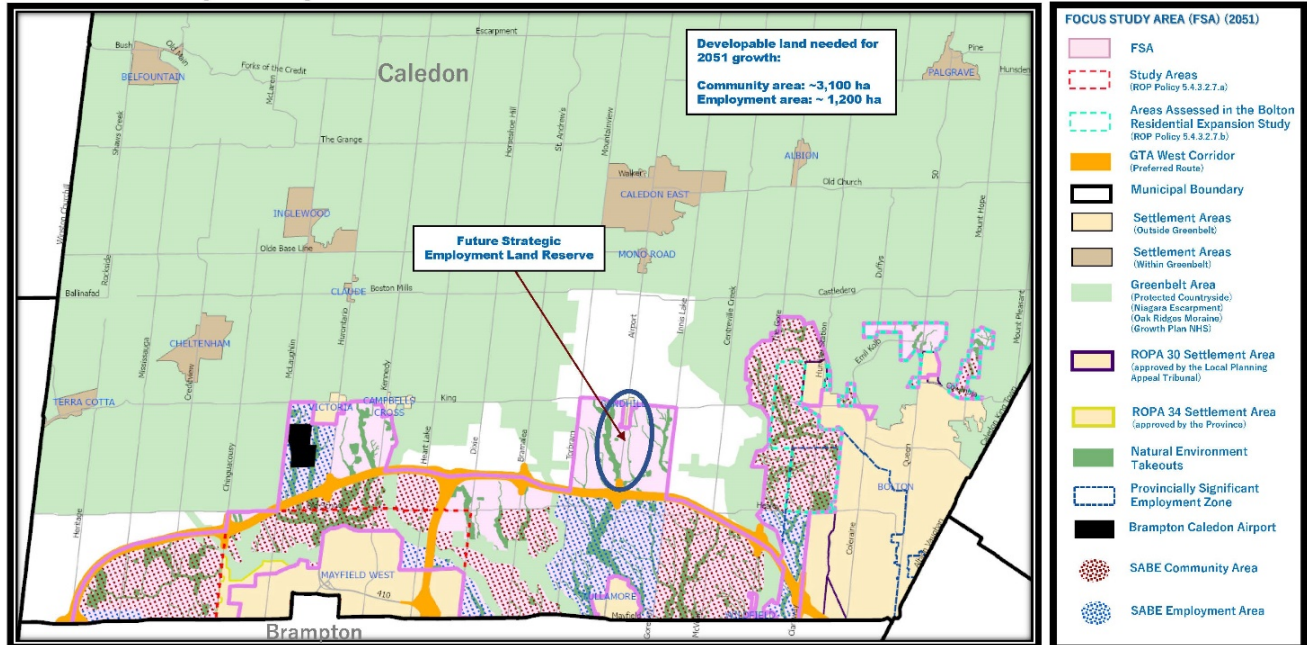
In December 2020, based on the findings of numerous technical studies including the Phase 1 report, a SABE concept map was presented to Regional Council for consideration (**Figure 3**). It incorporates approximately 5.8 ha of the CHPMARA Humber 10 deposit and portion of a 300 m buffer potentially associated with the mapped deposit.

To ensure consistency with provincial plans and policies, including Section 2.5.2.5 of the PPS and Section 2.2.8(3)(i) of the Growth Plan, this Phase 2 HPMARA / CHPMARA Impact Assessment is being undertaken to evaluate the implications of including this small portion of CHPMARA Humber 10 in the SABE. This report builds on and should be considered as an extension to the Phase 1 report.

Figure 3 - SABE Concept Map (December 2020) DRAFT; source: Region of Peel

## SABE Concept Map

(December 2020 version updated with ROPA 30 LPAT Settlement & Approved ROPA 34)



**WARNING TO USERS:** This map represents a conceptual area for the Settlement Area Boundary Expansion and is being provided for information purposes only. Users are advised that this mapping is currently in draft and may change. The Region of Peel does not certify the accuracy of the information provided nor does it provide any assurance that the mapping will remain unchanged. Any reliance placed by the user on the information provided herein is strictly at the risk of the user, and the Region of Peel does not assume responsibility for any loss or damages resulting to the user or any third party by reliance on this information.

**Notes:**

- 1) Other natural environmental constraints not identified on this map, including potential restoration lands, will be identified through further analysis and may further limit development.
- 2) The ~4,300 ha SABE is based on a draft land needs assessment which is under review.

**DISCLAIMER**  
Mapping is **DRAFT**  
only for further study  
and discussion.



This study of potential impacts on a HPMARA / CHPMARA is an evolving document. At their March 11, 2021 meeting, Regional Council passed several resolutions, including a resolution opposing construction of any transportation corridor traversing the Region of Peel, and specifically, the currently proposed GTA West Highway and Transmission Corridor. This corridor had been proposed as the northern boundary of the Focus Study Area and preliminary Settlement Area Boundary Expansion (SABE) concept in December 2020. The implications of the Council direction may require further analysis should the proposed boundary of the SABE change as a result. If such implications arise, they will be addressed, as necessary, prior to finalization of this report.

### 1.2. Study Context

Over time, the province has produced a series of non-renewable resources training manuals that address the need for municipalities to consider options or strategies to provide for aggregate protection and availability. In 1997, the Province released the Non-Renewable Resources Training Manual (NRR Manuals) to assist planning authorities in implementing the provisions of the PPS 1996 related to mineral resources. An updated version of this manual, the “Mineral Aggregate Resource Reference Manual” was released in January 2001 as an “discussion draft”. The “Aggregate Resources Program Policies and Procedures” were released in 2006. Each of these documents provide guidance on how to implement provincial policy



governing **mineral aggregate resources**. While dated, given that the Provincial policy direction for managing aggregates has remained relatively constant over time, these documents still provide appropriate direction in interpreting and applying Provincial policy. They are referred to collectively in this report as the NRR Manuals.

The policies in the PPS and the Growth Plan require that “in known deposits of **mineral aggregate resources** and on **adjacent lands, development** and activities which preclude or hinder the establishment of new operations:”<sup>5</sup> be managed. **Adjacent lands** are defined in the PPS as “those lands contiguous to (...) deposits of mineral aggregate resources where it is likely that development would constrain future access to the resources (...)”<sup>6</sup> This direction is implemented in Section 3.3.2.10 f) of the ROP that requires area municipalities to include policies in their official plans that:

(...) recognize existing licensed mineral aggregate extraction sites and existing extractive designations and protect them from new **development** that would receive approval under the Planning Act if that **development** would preclude or hinder their expansion or continued use or would be incompatible for reasons of public health, public safety or environmental impact”<sup>7</sup>

Section 5.11.1.4 of the COP which states “Development within or adjacent to the protected area that would preclude or hinder extraction or access to the aggregate resources will be restricted”<sup>8</sup> reinforces this requirement.

Adjacent lands are addressed as “zones of influence” around aggregate resource deposits in the NRR Manuals. The recommended process for defining a zone of influence starts with a minimum setback from an unconsolidated deposit (sand, gravel, clay) or a mineral aggregate pit operation of 300 metres.

The COP adopts this standard in Section 5.11.2.6.1 where an area of influence is deemed to be 300 m for the limits of a CHPMARA for sand and gravel operations.

Other factors such as the extent of the deposit, the area required to accommodate operational activities and potential impacts on adjacent lands are then factored in to calculate the appropriate zone of influence for each deposit. A “zone of influence” analysis is required for CHPMARA Humber 10 given that the settlement boundary expansion identified could “preclude or hinder the establishment of new operations or access to the resources”<sup>9</sup>. As required in the COP, starting at 300 m, the zone of influence is identified and the potential impact of the recommended settlement area boundary expansion on the known mineral aggregate resource deposit are accessed.

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<sup>5</sup> PPS 2020, Section 2.5.2.5, pg. 29.

<sup>6</sup> PPS 2020 Definitions, pg. 39.

<sup>7</sup> ROP, Consolidated 2018, Section 3.3.2.10 f), pg. 84.

<sup>8</sup> COP Consolidated April 2018, Section 5.11.1.4, pg. 5-125.

<sup>9</sup> PPS 2020, Section 2.5.2.5, pg. 29.

In assessing whether removal of a portion of the CHPMARA Humber 10 deposit is consistent with the direction in Section 2.5.2.5 of the PPS that “development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if” under certain circumstances the following factors are also addressed:

- the likelihood of extraction from CHPMARA Humber 10 based on an assessment of current land uses and lot fabric within, and adjacent to, the identified resource.
- the matter of public interest if the proposed settlement area boundary expansion would serve a higher level of public need than extraction of the resource.
- what mitigation measures could be implemented to protect components of the resource.

### 1.3. Policy Context

This report is a continuation of the analysis documented in the Phase 1 report. The policy framework identified and discussed in the Phase 1 report continues to be the context for this report. Specifically, the analysis in this report focuses on Section 2.5.2.5 of the PPS, Section 2.2.8 of the Growth Plan and the policies in Section 3.3 of the ROP and Section 5.11 of the COP.

## 2. Study Methodology

In undertaking this study, a windshield survey of the CHPMARA Humber 10 resource area and the potential associated zone of influence was conducted and augmented by air photo analysis. A meeting was held with provincial staff from the Ministry of Municipal Affairs and Housing (MMAH), the Ministry of Natural Resources and Forestry (MNR) and the Ministry of Northern Development and Mines (MNDM) to discuss the factors to be addressed. MNR provided input on historic aggregate extraction in the resource area. A desktop review of information was conducted of material available from the Region of Peel, Town of Caledon, MNR and MNDM.

The Region and the Town of Caledon are currently undertaking a review of aggregate policies in their official plan. The consultant retained to undertake this review provided input on their ongoing work and shared research that was relevant to this analysis.

The study focuses on a general assessment of the nature of the resource, the process by which it was identified and the implications of reducing its area. The appropriate width of the area of influence is discussed. Potential impacts on the unconstrained portions of the deposit and associated zone of influence, are identified and considered. Detailed technical analyses of noise, hydrological, hydrogeological or air quality factors and haul route/traffic assessment were not undertaken. The environmental review being conducted for the Region as part of the SABE process was referenced to determine if work being undertaken as part of the SABE had identified any additional environmental factors that should be considered.

The analysis addresses five areas:

1. Overview of identified and protected aggregate resources in Caledon.
2. Analysis of existing and past uses in the CHPMARA Humber 10 area.
3. Rationale for the proposed SABE encroaching into the resource area.
4. Impact analysis of potential and existing land uses.
5. Potential mitigation measures.

## 2.1. Study Area

CHPMARA Humber 10, covers an area of approximately 297 ha, south of Castlederg Sideroad running from just west of Innis Lake Road to east of The Gore Road. It is divided into four distinct parcels as shown on **Figure 4**, by core areas of the Regional Greenlands system. These parcels have been numbered 1 to 4 for reference purposes in this report and are shown individually on **Figures 5A – E**. Parcel 4 is divided into 4A which is within the Greenbelt Plan area and 4B which is not.

Parcels 1 and 2 and very small portions of Parcels 3 and 4 are within the Oak Ridges Moraine Conservation Plan (ORMCP) area. Parcels 1, 2 and 3 are in the Greenbelt Natural Heritage System (GNHS). Parcel 4 is split between the GNHS and the Prime Agricultural Area. It includes the 5.8 ha parcel, designated as Prime Agricultural that is proposed to be incorporated as SABE Community area.

Apart from an area at the south end of Parcel 1 fronting on Innis Lake Road, and a few lots at the north end of Parcel 2 fronting on Centreville Creek Road, the west side of the CHPMARA Humber 10 areas is much less fragmented than the east side. Parcels 2 and 3 are divided by a cluster of residential lots as shown on **Figures 5B** and **5C** that are excluded from the CHPMARA. The area north of parcel 3 along Castlederg Road is divided into a series of residential lots which lie within the 300 m zone of influence around the resource. There is a pond in Lot 14, Con. 3 that is reported to be a rehabilitated former extraction site. This separates parcels 3 and 4 (**Figures 5C** and **5D**). There is a cluster of residential lots fronting on The Gore Road some of which abut Parcel 4, others of which are included in Parcel 3.

Figure 4 - CHPMARA Humber 10; Source: PLANSCAPE 2021

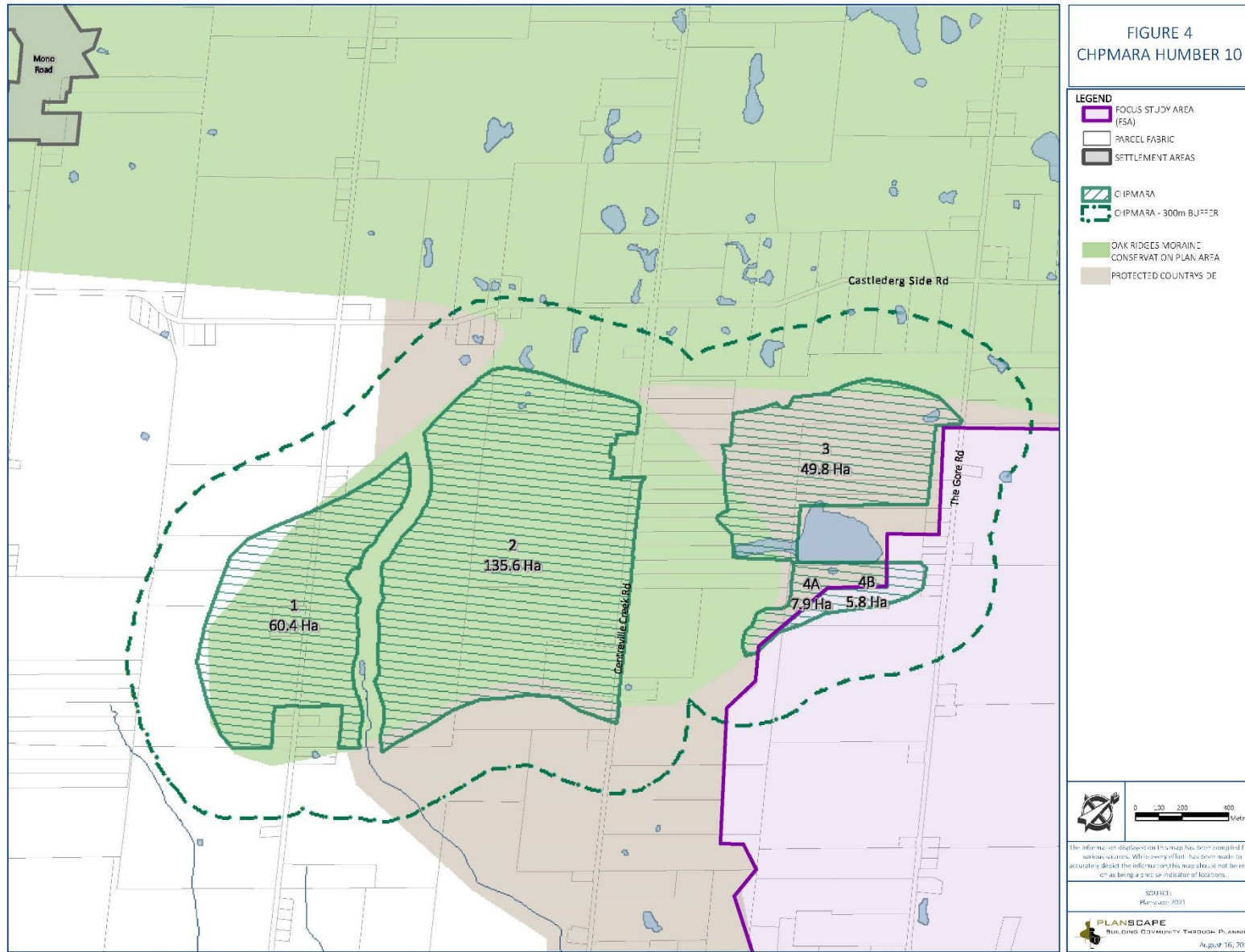


Figure 5A - CHPMARA Humber 10 (Area 1); Source: PLANSCAPE 2021

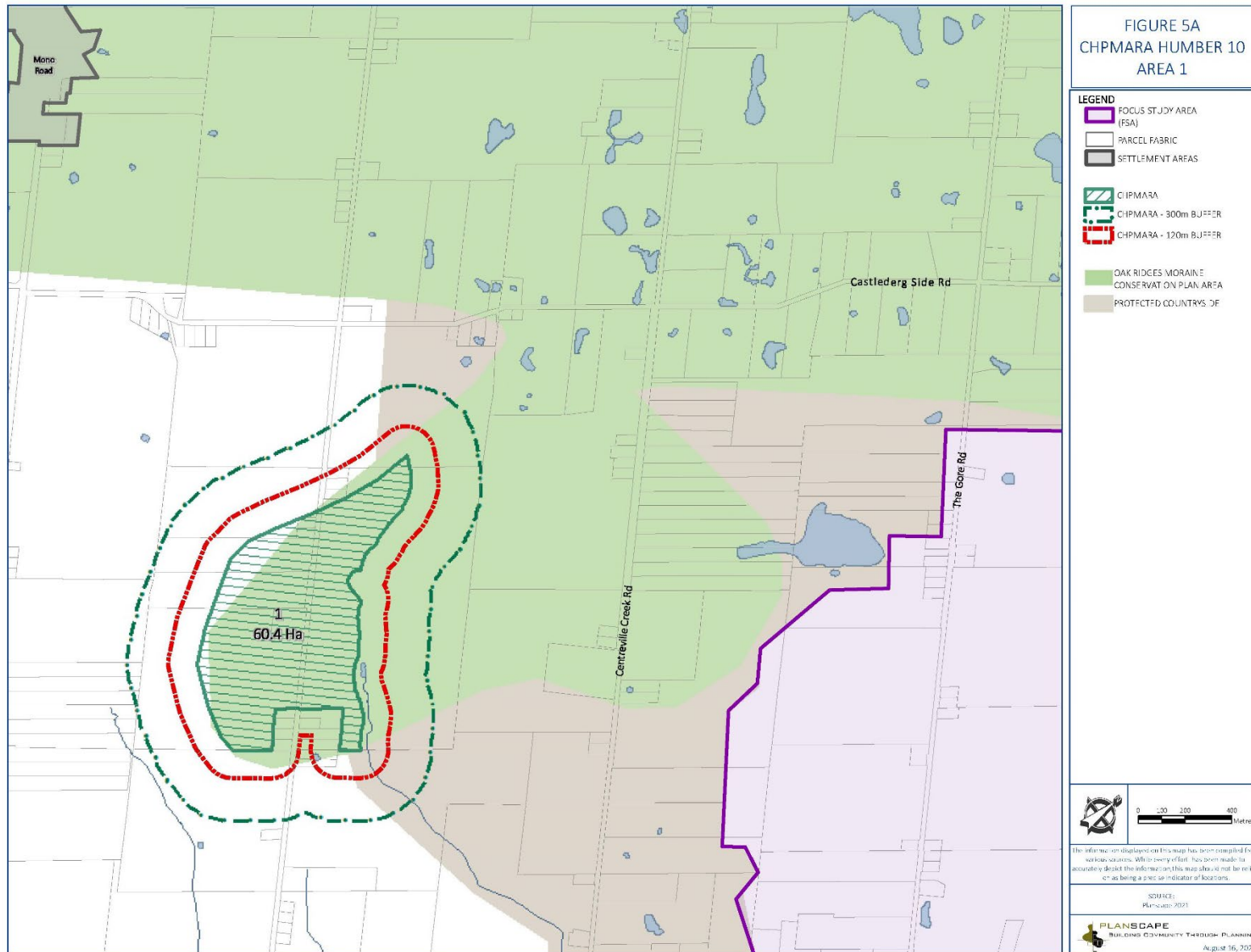


Figure 5B - CHPMARA Humber 10 (Area 2); Source: PLANSCAPE 2021

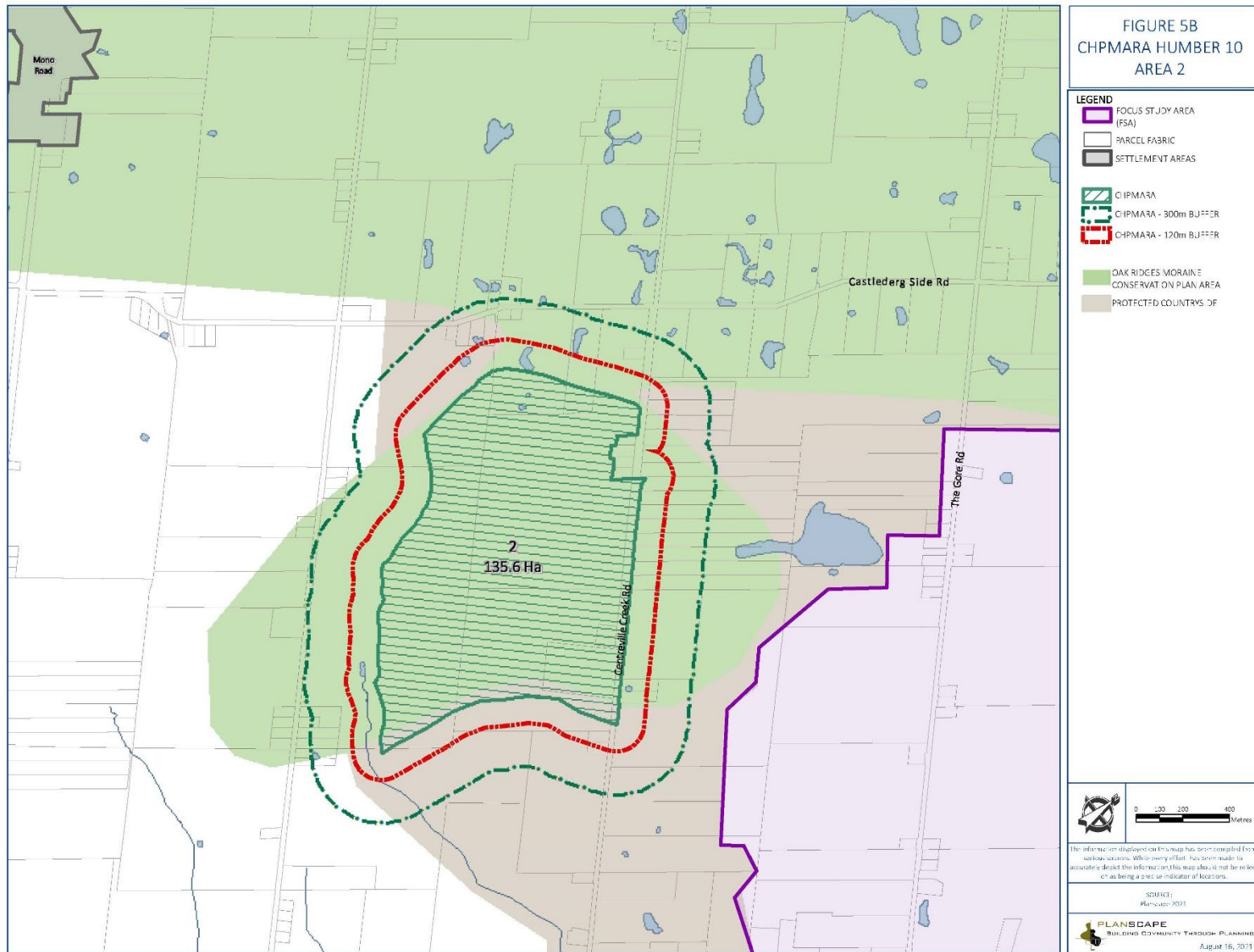


Figure 5C - CHPMARA Humber 10 (Area 3); Source: PLANSCAPE 2021

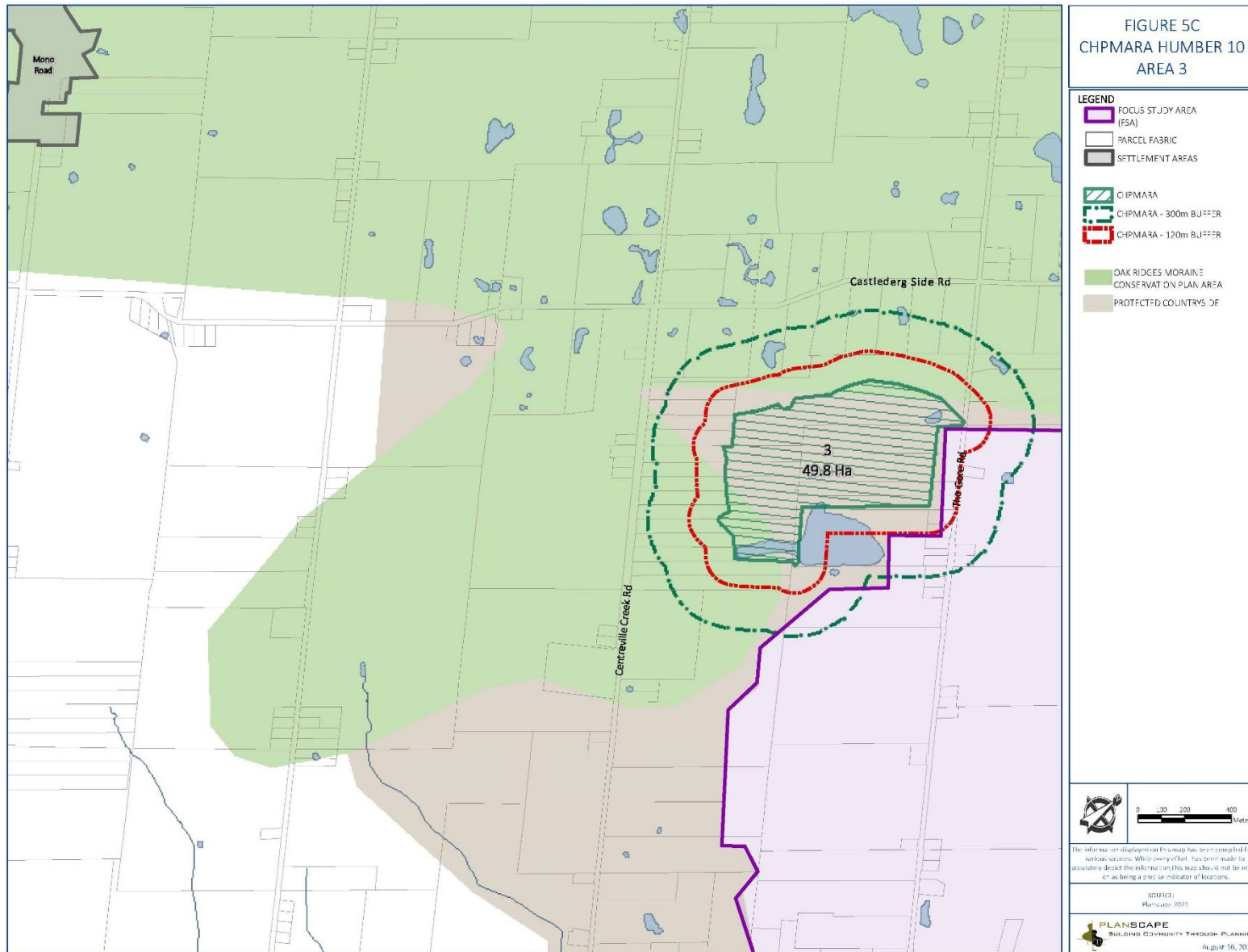


Figure 5D - CHPMARA Humber 10 (Area 4); Source: PLANSCAPE 2021

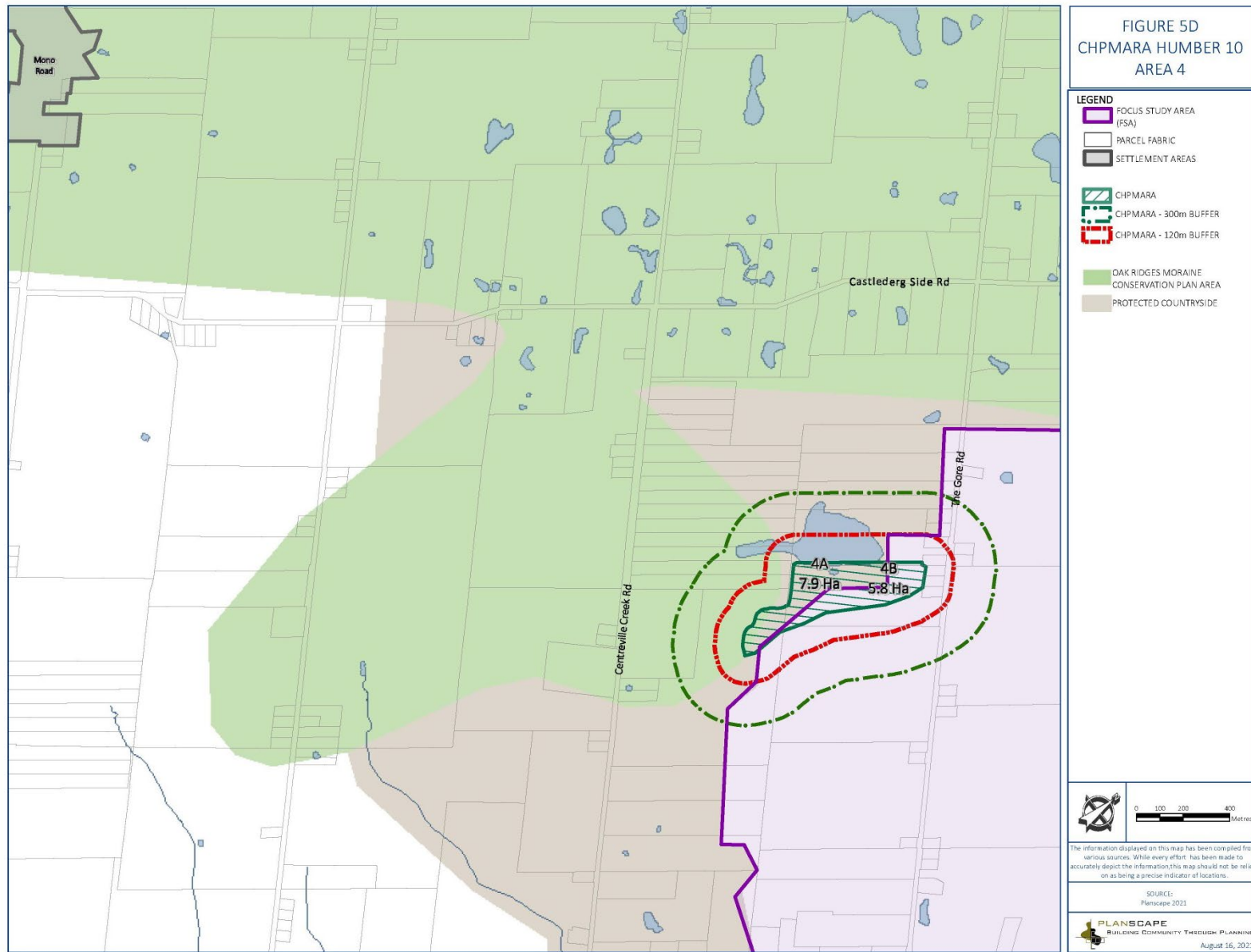
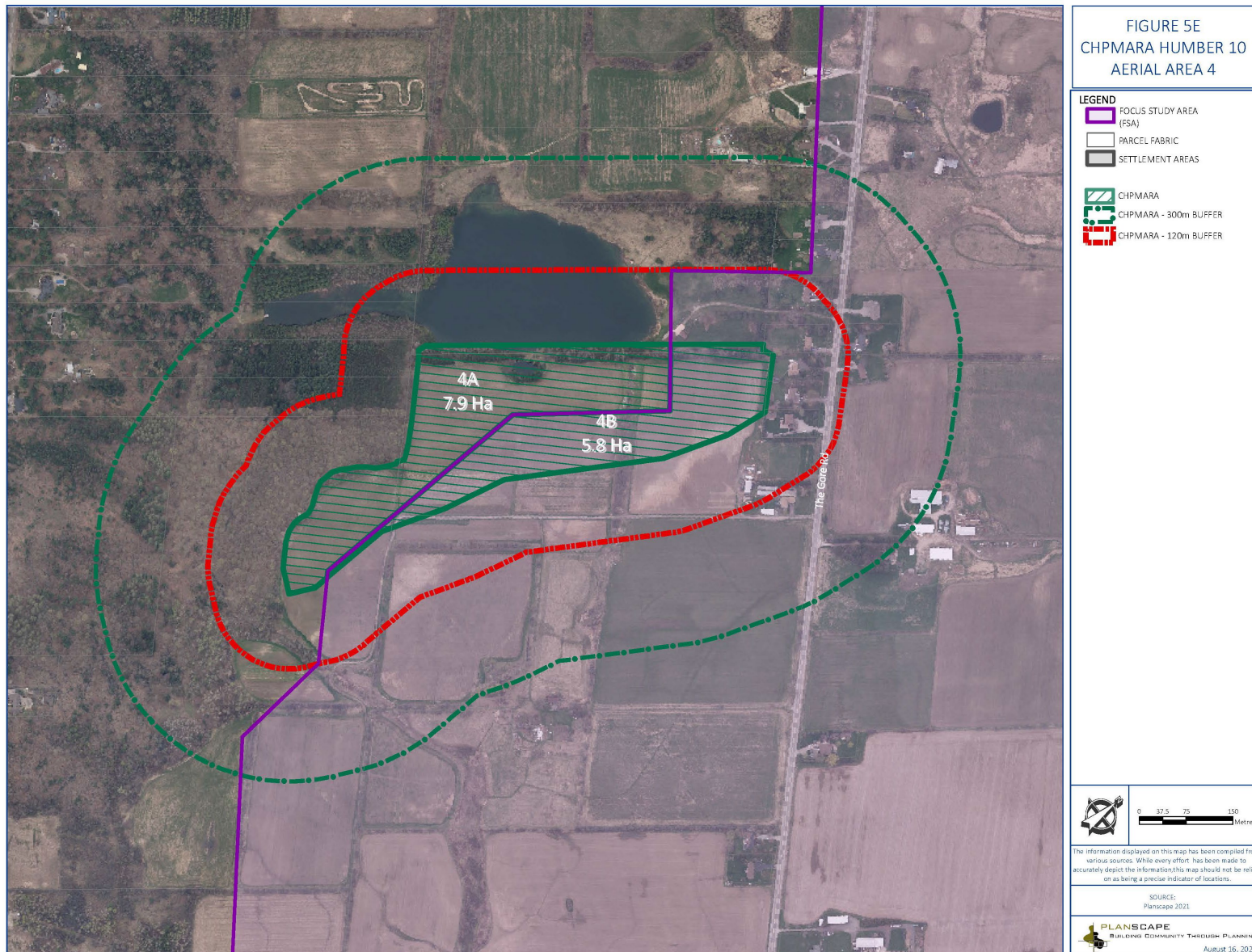




Figure 5E - CHPMARA Humber 10 (Aerial Area 4); Source: PLANSCAPE 2021



## 2.2. Analysis

### 2.2.1. Overview of Protected Aggregate Resources in Caledon

The aggregate resource areas in Caledon have been identified through an iterative process based on work by the Ontario Geologic Survey (OGS) and documented in the Aggregate Resources Inventory Papers (ARIP). These papers provide detailed analysis of the physiography of designated areas of Ontario and are updated over time. ARIP Paper 165 which was updated most recently in 2009, provides a detailed assessment of the Region of Peel.

In 1996, the Region of Peel initiated a Caledon Community Resources Study (CCRS) “to develop a sustainable community model for the management of the aggregate resources that will enable the Caledon ecosystem and community to be maintained and enhanced over the long term.”<sup>10</sup> In Phase 2 of this work, the CCRS reviewed the work documented in the ARIP and assessed what of the identified aggregate base was accessible for extraction. Working from the ARIP estimate that approximately 16,600 ha of land in Caledon could be classified as high potential sand and gravel or bedrock resources, a constraint exercise was undertaken that removed lands based on a set of criteria.

These constraint criteria included:

- tertiary sand and gravel resources and bedrock with an overburden of greater than 8 metres;
- designated settlement areas and registered plans of subdivision;
- Niagara Escarpment Plan (NEP) protected lands;
- Provincially significant wetlands Class 1 - 3 and habitat of vulnerable, endangered and threatened species;
- Areas of Natural and Scientific Interest (ANSIs); and
- Environmentally significant or sensitive areas.

After removal of lands subject to these criteria and other adjustments including allowance for licensed areas, the Region established, as a starting point, an HPMARA land base of 7,935 ha. After additional analysis at the local municipal level this area was reduced to 7,587 ha.

The 7,587 ha of land was divided between 10 geographic areas in Caledon, one of which was CHPMARA Humber 10, a sand and gravel resource. CHPMARA Humber 10, as identified in the CCRS report, had an area of 297 ha which represented 4% of the area identified for consideration as HPMARA / CHPMARA in the ROP and the COP. The areas proposed to be removed from CHPMARA Humber 10 and included in the SABE represents approximately .02% of the identified area.

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<sup>10</sup> Caledon Community Resources Study Phase 2: Resource analysis and conceptual Strategy Development Report, Planning and Engineering Initiatives Ltd., & Associates, August 1998, pg. 1.

Although the ARIP has been updated since the identification of the HPMARA / CHPMARA, the areas identified have not changed. The area mapped as CHPMARA Humber 10 in the ROP and the COP, covers an area of approximately 260 ha. It is the basis of the analysis in this report.

As noted previously, protecting an aggregate resource area also requires protection of the area of influence around the resource. Section 5.11.2.6.1 of the COP establishes 300 m as the zone of influence around a sand and gravel CHPMARA. This can then be adjusted based on analysis of potentially impacted sensitive uses and mitigating measures that can be implemented to reduce impact. Sensitive uses include “buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one of more adverse effects from aggregate operations or major facilities”.<sup>11</sup> Residential uses, of which there are many around CHPMARA Humber 10, are sensitive uses.

The type, extent, and quality of the deposit in CHPMARA Humber 10 was evaluated in the CCRS in 1998 and updated in the 2009 update of the ARIP. In 1999, the CCRS estimated a total 50 million tonnes of secondary sand and gravel would be available in the resource. It was classified as a deposit of secondary significant which is reflected in its categorization in the COP as “Aggregate Reserve Lands” as opposed to the higher categorization of “Aggregate Resource Lands”. Under the constraint’s comments with regards to this deposit in the CCRS, it was noted that CHPMARA Humber 10 was “presently considered low likelihood for extraction in near future”.<sup>12</sup>

In the 2009 update of the ARIP, the CHPMARA Humber 10 resource was described as follows:

An isolated ice-contact deposit associated with the Palgrave Moraine, is located southeast of Caledon East. This deposit has been selected for possible resource protection at the secondary level. It contains sand and minor amounts of gravel, as well as significant amounts of silt and clay. A previously licensed pit, Pit No. 59, reportedly had face heights of from 8 to 12 m and extracted gravel with a stone content ranging from 30 to 50%. This gravel was found underlying a sandy till. Consequently, the deposit is shown as “buried” on Map 1A. Previous intermittent extractive activity in this deposit occurred in the southern portion, where an unlicensed pit (Pit No. 58) had a face height of 3 m. Sample PE-SS-01, from this area, was found to be predominantly sand with a trace of silt.<sup>13</sup>

This is a secondary resource.

Aggregate is important to the Town of Caledon. It contributes to economic well-being by ensuring access to material vital for construction. Access to local resources significantly reduces transportation costs. Value added processors are attracted to the area providing jobs and acting as a stimulus for economic development. However, to perform this function the resource must be of sufficient significance to warrant the cost of excavation.

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<sup>11</sup> Town of Caledon Official Plan, Section 5.11.2.6.2, April, 2018 Consolidation.

<sup>12</sup> CCRS August 1998, pg. 90.

<sup>13</sup> Aggregate Resources Inventory of the Region of Peel, Golder and Rowell, 2009, pg. 16.

In the CCRS in 1998, it was estimated that of the 7,218 ha of sand and gravel resource in Caledon, approximately half were primary. In the COP, 2,381 ha in five of the areas identified as CHPMARA are classified as Reserve or secondary. The other five CHPMARA sites comprising a total of 4,837 ha are classified as Resource, or primary.

Based on figures in the CCRA, and adjusted for extraction since the report was released, the volume of sand and gravel Reserves in the municipality is estimated at approximately 650 million tonnes. The CHPMARA Humber 10 area is estimated to contain 50 million tonnes of sand and gravel reserves or less than 8% of the available resource. Using a very rough estimate, assuming equal distribution of the resource, the 5.8 ha parcel proposed to be included in the SABE could contain 1 million tonnes or .001 percent of the available resource<sup>14</sup>.

Aggregate extraction in Peel Region is limited largely to the Town of Caledon. Reserves in Mississauga and Brampton have been depleted or sterilized by development over time. The high-quality sand and gravels of the Caledon and Credit Valley outwash deposits are of significant value as reflected in the number and extent of licensed operations in the municipality. In 2020, there were 24 active licenses issued under the Aggregate Resources Act (ARA) covering in excess of 3,914 ha of land<sup>15</sup>. Most of these operations, as shown on **Figure 2** are centered around Caledon Village with a cluster around Cheltenham. There are no current licenses in the CHPMARA Humber 10 area.

The area subject to license under the ARA in Caledon has not varied over the last 20 years. In 1997, an area of 3,947 ha was licensed. In 2019 the area was 3,914 ha, a slight decline<sup>16</sup>. The area subject to licence was increased in December 2021 with the approval of the James Dick Construction Limited Erin Pit Extension which expanded into Caledon.

As part of the land base of HPMARA / CHPMARA resources in Peel, CHPMARA Humber 10 is a secondary resource, is the smallest of 10 identified sites and it is physically removed from the large cluster of licenses sand and gravel operations in central Caledon.

#### 2.2.2. Existing Aggregate Use Analysis

The CHPMARA Humber 10 resource area as identified in the ROP and COP is approximately 260 ha divided into four parcels by core features of the Greenbelt NHS and residential area. For reference purposes in this report, the 4 areas have been numbered Parcels 1-4 as shown on **Figures 5A - D**.

To understand the potential for aggregate extraction in CHPMARA Humber 10 a survey was done of the land uses in each of the four parcels within the boundary and in the surrounding 300 m of influence. This survey was based on air photos, a windshield inspection, assessment data and zoning. For analysis purposes each parcel was surveyed individually.

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<sup>14</sup> CCRS, August 1998.

<sup>15</sup> Data provided by the Region of Peel.

<sup>16</sup> Numbers provided by Region of Peel Planning staff.

### Parcel 1 - Figure 5A

Parcel 1 is approximately 60 ha in area or 23% of the mapped area of CHPMARA Humber 10. The land uses in Parcel 1 include a cluster of residential uses at the south end fronting on Innis Lake Road. There are several small residential lots further north up Innis Lake Road on the west side and a strip of three lots on the northern boundary of the CHPMARA. One of these lots is a boarded-up church with an associated cemetery. Otherwise, as shown on **Figure 7**, the lots within the Parcel 1 are larger than 10 ha with potential to develop large scale aggregate operations. The area of influence, if drawn just around Parcel 1, is characterized by farm properties and large lots.

### Parcel 2 – Figure 5B

Parcel 2 is approximately 136 ha in area or 53% of the mapped area of CHPMARA Humber 10. With the exception of a strip of four residential lots on the west side of Centreville Road, the lots in Parcel 2 are large farm lots well in excess of 10 ha. However, there is a sizable cluster of lots developed as large residential estates on the east side of Centreville Creek Road that are within the area of influence for Parcel 2.

The cluster of lots along Centreville Creek Road lie between Parcels 2 and 3. These long narrow lots of approximately 4 ha, extend the depth of the original concession lots and extend up to the edge of Parcel 3 of the CHPMARA. The houses are located at the front of the lots and are within the 300 m zone of influence for Parcels 2, 3 and 4.

### Parcel 3 – Figure 5C

Parcel 3 is approximately 50 ha in area or 19% of the mapped area of CHPMARA Humber 10. It includes two lots that are larger than 10 ha, but one straddles the boundary of the parcel. Within the 300 m area of influence is a cluster of residential lots fronting on the Gore Road, the strip of lots on the Centreville Creek Road previously mentioned and a row of residential lots on the south side of Castleberg Road. The southern portion of the area contains core features of the Greenbelt NHS.

### Parcel 4 – Figure 5D

Parcel 4 is 13.5 ha in area, 5 % of the mapped area of CHPMARA Humber 10. Of that area 5.8 ha (2%), is proposed to be included in the SABE. There is a cluster of residential lots fronting on The Gore Road that abut the parcel. The area behind these lots is one farm parcel with frontage on The Gore Road. To the north of Parcel 4 is the “fishing pond”, the rehabilitated Pit 59. It is not clear if any of the remaining area had been excavated as part of this previous operation.

The yield estimated for the CHPMARA Humber 10 resource area in the CCRA was 50 million tonnes. If it is assumed that the yield is spread equally across the area, very roughly, based on percentage of area and not accounting for the material in the areas excluded from the original 297 ha area, the yields would be as follows:

Parcel 1	11.5 million tonnes
Parcel 2	26 million tonnes
Parcel 3	10 million tonnes
Parcel 4	2.5 million tonnes

For the area proposed to be incorporated in the SABE, the yield would be approximately 1 million tonnes.

A combination of Parcels 1 and 2 has the most potential for extraction. The parcels are larger, there is less fragmentation of the land base and fewer established sensitive uses both within the resource area and in the zone of influence. These are the larger components of the resource area and comprise 77% of the identified land area. Based on the extremely rough yield calculation, they could contain approximately 37 million tonnes of material.

The CHPMARA Humber 10 resource is one of the smallest CHPMARA. In the assessment in the both the ARIP and the CCRS, it was characterized as a secondary significant deposit. In the CCRS the following constraints/comments were noted:

- No direct access onto major roads;
- North-south stream corridor requiring protection;
- Three residential clusters present which need to be buffered; and
- Presently considered low likelihood for extraction in near future.

Opportunities were identified as “close proximity to Bolton and to Regional Roads 7 and 50”<sup>17</sup>.

Results from a survey conducted in the area as part of the CCRS concluded that “the expectation is that this is one of the areas which is least likely suited to extraction in the near future because of its relative location and secondary significance”<sup>18</sup>.

According to the ARIP 165 there are three former, unlicensed pits in the CHPMARA Humber 10 resource area, pit numbers 57, 58 and 59 as shown on **Figure 7**. A review conducted by MNRF of the history of aggregate extraction in this area back to the early 1980’s, revealed the presence of one historic, abandoned pit which appears to be Pit 57 in the east side of Innis Lake Road. Neither MNRF or the Town of Caledon have any records of previously licensed or existing licensed pits, quarries, or wayside pits in the area. According to the CCRS, Pit 59 has been rehabilitated as a pond and in 1998 was “actively used as a fishing area by a fishing club”.<sup>19</sup>

The pond is still in existence but has been excluded from the HPMARA / CHPMARA mapped in the official plans. The windshield survey conducted of the CHPMARA Humber 10 areas revealed some evidence of previous extraction in the form of excavated areas now grown over, but no active aggregate operations.

A review of land uses in the area based on current zoning, air photo review, and a windshield survey of the area did not reveal any aggregate related operations in the vicinity of CHPMARA Humber 10.

All but a portion of Parcel 4 of CHPMARA Humber 10 is in the Greenbelt. Parcels 1 and 2 and a small part of Parcels 3 and 4A are also in the ORMCP area. The portion of Parcel 4 outside of the

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<sup>17</sup> CCRS 1998, pg. 90.

<sup>18</sup> CCRS 1998, pg. 91.

<sup>19</sup> CCRS 1998, pg. 92.

Greenbelt is in the Prime Agricultural designation. The entire area recommended for inclusion in the SABE (Parcel 4B) is outside the Greenbelt boundary.

### 2.3. Settlement Area Boundary Expansion

The SABE study is part of a “municipal comprehensive review” process being undertaken as part of the update of the ROP to 2051. This update must address provincial growth projections for Peel. As the basis for the review, a land needs assessment was completed, based on provincial projections. This assessment confirmed that Peel, after accommodating growth through intensification in existing settlement areas, would need to an additional 4,300 hectares of land to accommodate growth in the SABE to 2051.

Policy 2.2.8.3 of the Growth Plan requires that the most appropriate location for the SABE be identified based on the comprehensive application of all the policies in the Plan. A thorough study of the FSA (**Figure 1**) was conducted to ensure Growth Plan conformity when selecting an appropriate SABE area. Technical studies were completed that addressed provincial interests, as well as PPS, Growth Plan, and other Provincial plan policies. These studies covered transportation, public health, public facilities, cultural heritage, archaeology, employment and commercial opportunities, agricultural impact, climate change, natural environment, fiscal impact, and mineral aggregate resource impact.

The findings of these studies were assessed to identify a SABE that best addresses long term public interest. It was concluded that the settlement areas of Bolton and Mayfield West presented the most appropriate foundation for long term growth and that the build out of the Rural System south of the Greenbelt Area would best address the “complete community” concepts promoted in the Growth Plan - where the built form of communities is compact, and transit and the necessities of daily living are readily available to residents.

Based on this assessment and in consideration of achieving a compact urban form, the initial SABE assessment concluded that Bolton’s community land expansion to 2051 should be framed by the Greenbelt to the north and the Greenbelt valley that roughly follows the Gore Road to the west. This includes the small 5.8 ha parcel of the CHPMARA Humber 10 resource area and a portion of the area of influence around it.

In addressing public interest based on a comprehensive analysis the SABE study concluded:

Community lands to the north-west of Bolton, constitut(e) the largest expansion area proposed for Bolton to 2051. This is justified given the proximity of the lands to the existing settlement area and the identification of a planned Major Transit Station Area location, focused around a GO Station, in the area. Transportation investment required to ensure a “complete community” in this area is likely to be substantial. Thus, a critical mass of residential development is required.<sup>20</sup>

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<sup>20</sup> Hemson, Planning Justification Report SABE Study Concept Map & Technical Study Findings, Dec. 10, 2020, Pg. 46-47.

The Major Transit Station (MTS) referenced is proposed to be located at the north east corner of the intersection of King and Humber Station Road in proximity to the existing rail line. This is in relatively close proximity to the CHPMARA Humber 10 area and is part of the justification for expanding the community boundary in this area. Significant population at appropriate densities will be required to efficiently support the transit station.

The area of CHPMARA Humber 10 proposed for inclusion in the community area is the only portion of the area outside of the Greenbelt boundary. It is adjacent to a parcel that was previously excavated and is rehabilitated as a pond so is now a natural feature. There are numerous sensitive uses within the area of influence around this parcel.

### 2.3.1. Impact Analysis

In assessing the impact of removing parcel 4B from the CHPMARA Humber 10, there are degrees of impact that need to be considered. Primarily, the impact will be on Parcel 4B of Humber 10, as shown on **Figure 6B**. Implementation of the proposed SABE expansion would directly sterilize that 5.8 ha portion of CHPMARA Humber 10.

It would also effectively preclude or hinder establishment of a future extraction operation in Parcel 4A because of its direct proximity to the proposed community area. The area of influence for Parcel 3 would also be within the proposed community boundary which, if there is insufficient distance to implement appropriate mitigation measures, could also sterilize that component of the CHPMARA.

However, in assessing impact on the resource, the current circumstances must be considered.

Based on the existing land uses in and around CHPMARA Humber 10 east of Centreville Creek Road, the lot fragmentation, the presence of numerous sensitive uses, access options and the portions of core areas of the GNHS on portions of the CHPMARA, it can be argued that the two parcels are already sterilized. As shown on **Figure 6**, there are residential clusters surrounding Parcel 3 and 4 which are well within the area of influence of 300 m as required in Section 5.11.2.6.3 of the COP. Portions of the core area of the Greenland System in which extraction is not permitted, appear to be within the resource areas. Regulatory setback requirements would further limit the potential size of any operation that may be established or in the case of Parcel 4 likely preclude the ability to establish a feasible extraction operation given its small size and configuration.

Parcel 3 and 4 of CHPMARA Humber 10 are small pockets with no license, no history of a license and no current extraction. The only evidence of extraction in that area is a former pit, noted on Map 1a to the ARIP 165 report (**Figure 7**). The former pit is located outside the CHPMARA and according to the CCRS, has been rehabilitated as a pond.





Figure 6B - CHPMARA Humber 10 Property Fabric Areas 3 and 4; Source: Peel Region

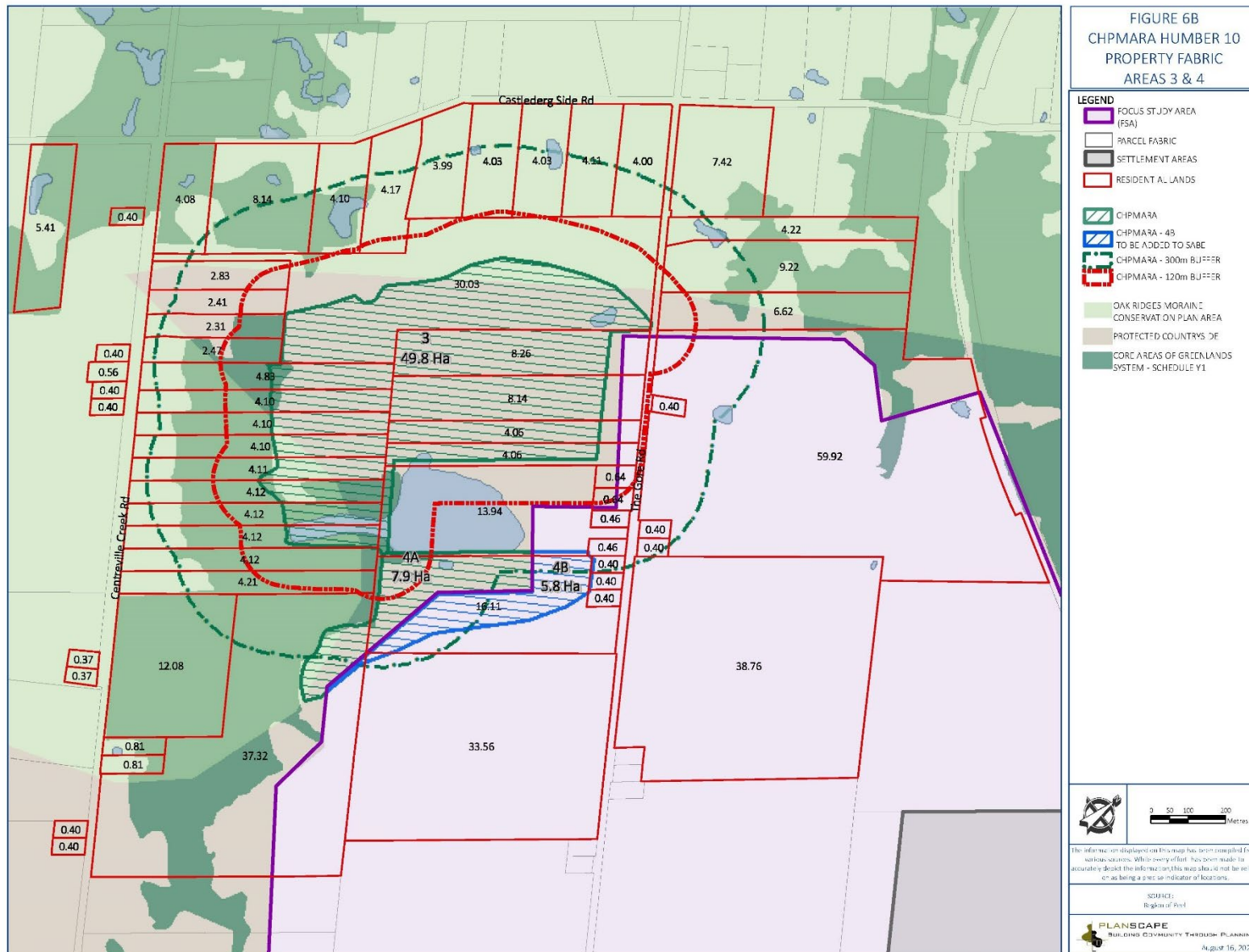
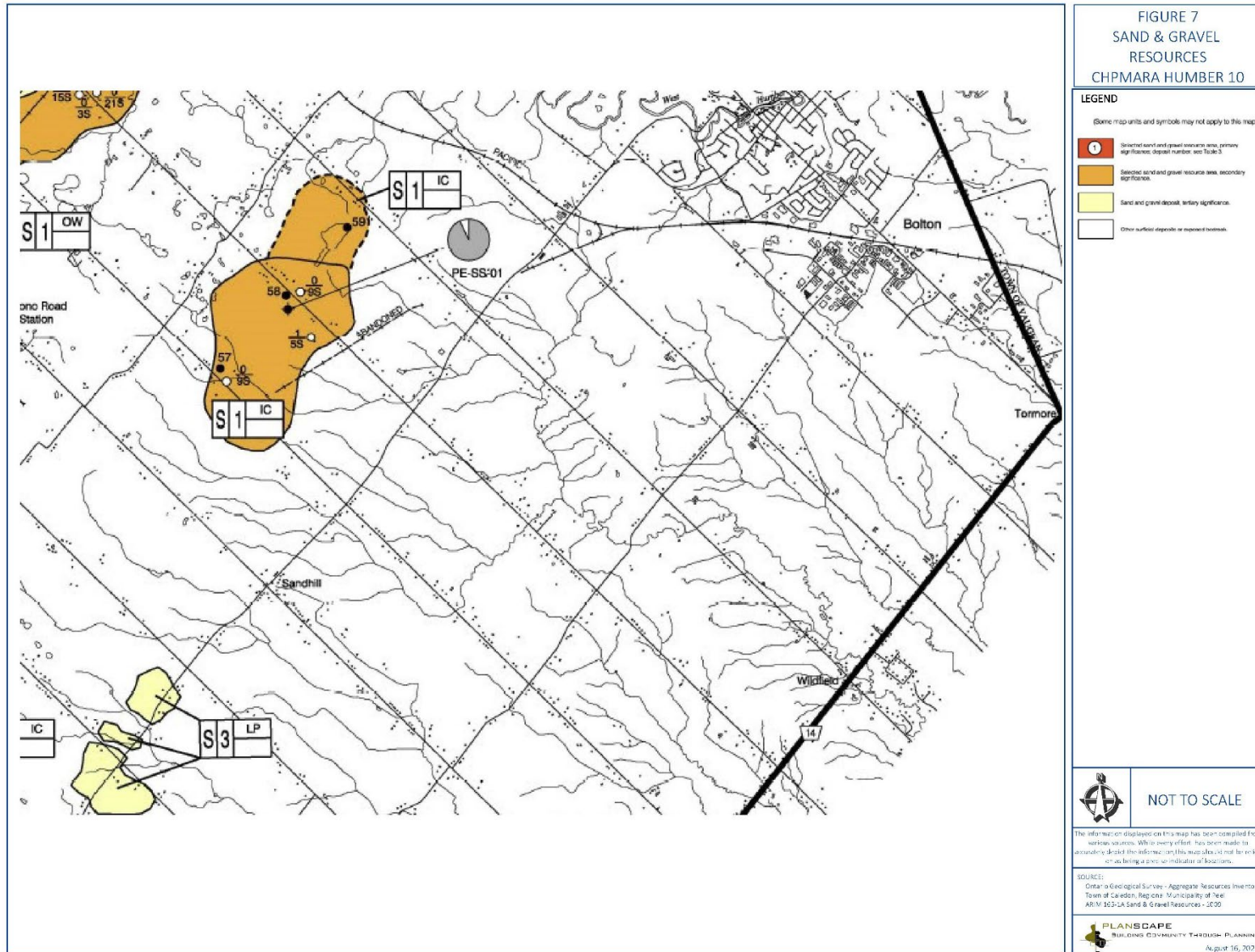


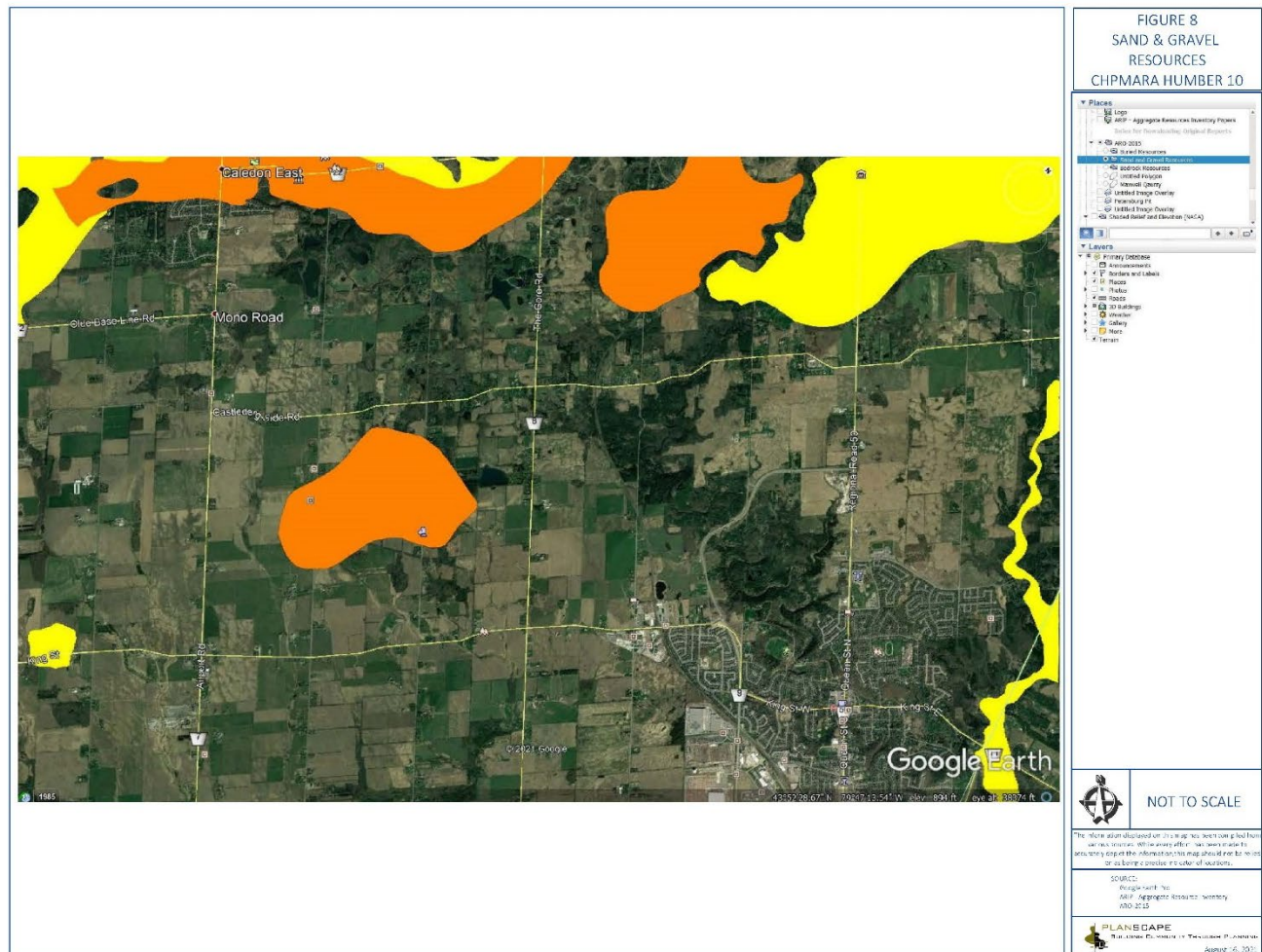
Figure 7 - Sand and Gravel Resources CHPMARA Humber 10; Source: ARIP updated 2009, Map 1



The feasibility of extraction from the lands east of Centreville Road is questionable. In addition to being part of a CHPMARA, the lands are part of a Natural Linkage Area, a High Aquifer Vulnerability Area and a landform Conservation Area Category 2 in the COP. There is extensive housing around the resource area. The cluster fronting on Castlederg Road to the north and Centreville Creek Road to the west is extremely high value. Land use compatibility issues would be significant and given the limited size of the parcels, mitigation would be challenging.

As noted, the aggregate resources in Caledon are currently under review. As a result of this review, it has been noted that the most recent mapping available as part of the ongoing updates to the ARIP calls into question the feasibility of extraction from Parcels 3 and 4. As shown on **Figure 8**, it appears that the area of the resource has been reduced, especially in Parcels 3 and 4. Whereas the mapping the ROP and COP shows the resource area abutting The Gore Road, in this updated mapping is well to the west of the road. This variation is being assessed as part of the ongoing review of the aggregate resources and will be addressed the updated COP. For the purposes of this report, the CHPMARA Humber 10 as currently mapped in the COP, is the basis for the analysis.

**Figure 8** - Sand and Gravel Resources CHPMARA Humber 10; Source: ARIP updated 2015, Map 1



The actual boundaries of the resource area will be confirmed by the ongoing Aggregate Policy and Mapping Review being undertaken jointly by the Region and the Town. In discussions with the consultants undertaking this review, they agreed that the boundaries of CHPMARA could be reduced. The extent of the changes will be addressed as part of the ongoing work. For the purposes of the SABE process the current designated area is the focus of the analysis.

Parcels 1 and 2 to the west of Centreville Road account for 76% of the resource area mapping the official plans. These parcels are comprised of large land holdings that provide opportunities to locate extractive operations that will not impact or be impacted by adjacent uses. The distance from the proposed boundary expansion is sufficient that the area of influence from development will not be impacted.

### 2.3.2. Mitigation

Applications to establish aggregate operations must be supported by studies that address potential impact on the resource area and how they will be mitigated. Impacts of particular concern are dust, noise, vibration, visual impact, impact of ground water, haul routes and increased traffic.

Mitigation measures used to minimize the impact of aggregate operations include management of noise, dust, vibration, and visual impact. Buffering through construction of berms, retention of natural features or use of noise barriers can mitigate impact. In an area of new development, building design and construction techniques can be used. Zoning standards can be set, and development layout directed to increase the separation from the active extraction area. Establishment of haul routes can minimize impacts from truck traffic. Notices can be registered on title and signage can be used to advise purchasers of the potential for aggregate extraction. Phasing of development can be implemented to manage extraction, so it is coordinated with the rate and direction of development. It may be feasible for extracted material to be used in the development thereby coordinating extraction and development. Rehabilitation plans can be structured to implement progressive measures that are aligned with the phasing of the development.

Tools for use in implementing mitigation measures include official plan policies, secondary plans, zoning by-laws, holding provisions, phasing conditions in plans of subdivisions or condominium, block plans, site plan control and development agreements. Use of these tools can be used to confirm and perhaps reduce the area of influence.

Although as indicated in the previous section, extraction in Parcel 3 is unlikely, if it is proposed, these tools could be used to mitigate impacts. As shown on **Figure 6B**, the 300 m area of influence from Parcel 3 extends into the SABE area. However, through the studies required to support an aggregate application, appropriate mitigation measures could be imposed to reduce the actual width of the zone. It is not uncommon with appropriate mitigation, to be able to reduce the zone of influence to 120 m. If this occurred, the area of influence for Parcel 3 would be restricted to the west side of Centreville Creek Road and a small corner of the north west corner of the SABE area.

If the settlement expansion area is extended to the boundary of the Greenbelt it is recommended that policy direction for secondary planning in the 300 m area of influence for the CHPMARA require an aggregate resource impact assessment to confirm mitigation requirements for proposed urban uses.

### 3. Conclusions

Based on the analysis it can be concluded that including a small 5.8 ha portion of the identified CHPMARA Humber 10 in the SABE, referred to as Parcel 4 in this report, would not “preclude or hinder the establishment of new aggregate operations or the access to the resources” and would serve the long term public interest.

The portion of the CHPMARA that would be impacted is already constrained by existing development, challenges with access and natural features. Extraction of the resource in this area would not be feasible.

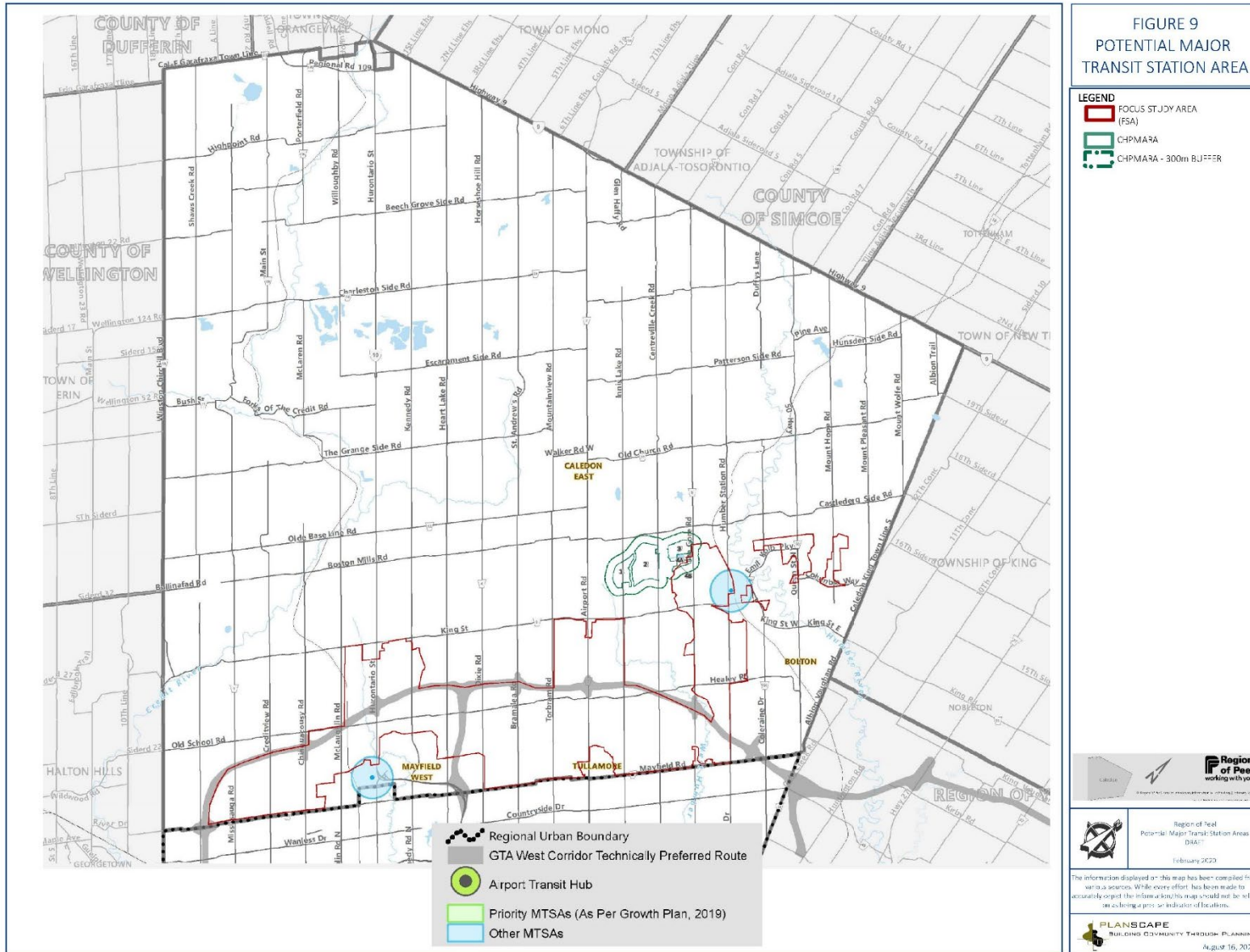
The feasibility of extraction in Parcel 3 of the CHPMARA Humber 10 is questionable. However, expansion of the SABE into the prime agricultural area in proximity to this portion of the HPMARA will not reduce the feasibility. It is the existing uses, the size of the parcel, access issues and the quality of the resource that bring the feasibility of extraction into question. There is sufficient separation between the boundaries of Parcel 3 and the proposed SABE area to mitigate impacts and protect the resource.

Parcels 1 and 2 of the CHPMARA Humber 10 are beyond the maximum area of influence and will not be impacted.

The issue of long term public interest is relevant to this analysis. The rationale for proposing development to the limit of the Greenbelt in this area, thereby impacting a small portion of CHPMARA Humber 10 and its associated zone of influence, is related to the proposed Major Transit Station shown on **Figure 9**. This facility is proposed in proximity to the south east portion of CHPMARA Humber 10 in a location that makes use of existing rail infrastructure. and has been chosen based on the principles of good planning. To ensure efficient use of this station, sufficient density is required. Maximizing residential development in proximity to this facility will achieve this. It implements the direction of the PPS and the Growth Plan that new development should be cost effective and located in a manner that makes the best use of existing or planned infrastructure and contributes to a complete community.

In response to the direction in Section 2.5.2.5 of the PPS and Section 2.2.8(3)I of the Growth Plan, it is concluded that encroachment of the SABE into the small 5.8 ha portion of CHPMARA Humber 10 would not preclude or hinder extraction. Given the size and configuration of the parcel, abutting uses, lot fabric and the questionable quality of the resource, extraction on this parcel is not feasible. Current extraction potential in the balance of the resource will not be impacted. The long term public interest will be better served to allow this small portion of CHPMARA Humber 10 to convert to a community area thereby increasing residential density to support the establishment of an MTS as an essential element of a complete community.

Figure 9 - Potential Major Transit Station Area; Source: Peel Region Feb. 2020



## 4. Addendum

Upon completion of this and other background reports in support of the SABE process, the Region embarked on a comprehensive public consultation process. During the period between August and December 2021, Regional staff reviewed the technical reports, considered public input and based on an extensive analysis produced a draft staff recommended SABE dated September 2021 for statutory consultation that is consistent with and conforms to provincial policy. This concept is shown on **Figure 10**.

Environmental work was completed identifying provincial policy constraint areas in which aggregate extraction would be precluded. An enlargement of the area around CHPMARA 10 is included as **Figure 11**.

This work and the draft recommended SABE were reviewed with reference to the conclusions reached in this report in August 2021. The draft proposed SABE boundary and identified environmental features were considered to determine if the either impacted any of the conclusions reached in the report. It was concluded that the conclusions reached, and recommendations contained in the final draft report dated August 16<sup>th</sup>, 2021, now incorporated in this final report, were not impacted. They are appropriate as final conclusions and recommendations to be considered and implemented in the updated ROP.



FIGURE 10 - REFINED SABE with COMMUNITY & EMPLOYMENT AREAS

