1. **MOMENT OF SILENCE**

2. **ROLL CALL**

3. **MOTION TO GO INTO CLOSED SESSION**

   THAT a closed meeting of Council be held on Wednesday, June 6, 2012, at 6:45 p.m. in the Waterloo County Room in accordance with Section 239 of the *Municipal Act, 2001*, for the purposes of considering the following subject matters:

   a) receiving of advice subject to solicitor-client privilege and potential litigation related to a matter before an administrative tribunal
   b) personal matters about identifiable individuals

4. **MOTION TO RECONVENE IN OPEN SESSION**

5. **DECLARATION OF PECUNIARY INTEREST UNDER THE MUNICIPAL CONFLICT OF INTEREST ACT**

6. **PRESENTATIONS**

   a) Canadian Urban Institute National Awards:
      i) Accelerator Centre, Tim Ellis, CEO
      ii) STEP Home Collaborative:
          - Ron Thomas & Suzi Gursoy, Participant Advisory Group (PAG)
          - Jennifer Mains, Agency Advisory Group (AAG)
          - Tara McTeer & Clarence Cachagee, Direct Support Worker Advisory Group (DSWAG)
          
          **Memo: 2012 Urban Leadership Awards – Recent Announcements by the Canadian Urban Institute**

   b) Aiden Webster, Westheights Public School Student, Re: Lights & Pedestrians at Roundabouts

   c) Iain Klugman, CEO & President, Communitech Partnership, Re: Update

7. **PETITIONS**
8. **DELEGATIONS**

a) Len Carter, President, Waterloo Regional Labour Council, Re: Position on Comprehensive Economic & Trade Agreement (CETA)

b) Robert Howe, Goodmans LLP (representing Activa Holdings), Re: P-12-064, Revised Regional Land Budget - Regional Official Plan Ontario Municipal Board Hearing (Phase 1) *(Item 13 a) on agenda)*

9. **MINUTES OF PREVIOUS MEETINGS**

a) Economic Development & Promotion – May 16, 2012

b) Council – May 16, 2012

c) Closed Committee – May 29, 2012

d) Planning & Works Public Input – May 29, 2012

e) Planning & Works – May 29, 2012

f) Administration & Finance – May 29, 2012

g) Community Services – May 29, 2012

h) Library – May 29, 2012

10. **COMMUNICATIONS**

11. **MOTION TO GO INTO COMMITTEE OF THE WHOLE TO CONSIDER REPORTS**

12. **REPORTS**

   Finance Reports

   Committee Reports

   a) Planning & Works - attached & marked PS-120529

   *Closed Planning & Works - attached & marked CPS-120529

   b) Administration & Finance - attached & marked FS-120529

   c) Community Services - attached & marked SS-120529

   d) Library - attached & marked LS-120529

Chief Administrative Officer

Regional Chair

Regional Clerk

13. **OTHER MATTERS UNDER COMMITTEE OF THE WHOLE**

a) P-12-064, Revised Regional Land Budget - Regional Official Plan Ontario Municipal Board Hearing (Phase 1)

14. **MOTION FOR COMMITTEE OF THE WHOLE TO RISE AND COUNCIL RESUME**

15. **MOTION TO ADOPT PROCEEDINGS OF COMMITTEE OF THE WHOLE**
16. MOTIONS

17. NOTICE OF MOTION

18. UNFINISHED BUSINESS

19. OTHER BUSINESS

* a) FCM Conference Report: Carl Zehr

20. QUESTIONS

21. ENACTMENT OF BY-LAWS – FIRST, SECOND & THIRD READINGS

  a) A By-Law to Determine the Amount of Taxes For Commercial, Industrial and Multi-Residential Property For 2012
  
b) A By-law to Authorize and Govern the Execution of Documents on Behalf of The Regional Municipality of Waterloo and to Repeal By-law 06-034, As Amended
  
c) A By-law to Expropriate Certain Lands for the Purpose of Road Improvements to Bridge Street (Regional Road 52), in the City of Kitchener
  
d) A By-Law to Expropriate Certain Lands for the Purpose of Road Improvements to University Avenue East (Regional Road 57), in the City of Waterloo
  
e) A By-Law to Amend By-law Number 58-87, as amended, Being a By-law to Designate and Regulate Controlled-Access Roads (Fischer-Hallman Road (Regional Road 58), City of Kitchener)
  
f) A By-Law to Amend By-law 06-072, as amended, being the Region's Traffic and Parking By-law (Westbound Dual Left-Turn Lanes, Regional Road 80 (Can-Amera Parkway), City of Cambridge)
  
g) A By-law to Confirm the Actions of Council – June 6, 2012

22. ADJOURN
MEMORANDUM

To: Chair Ken Seiling and Members of Regional Council

From: Rob Horne, Commissioner
Planning, Housing and Community Services

Subject: 2012 URBAN LEADERSHIP AWARDS – RECENT ANNOUNCEMENTS BY THE CANADIAN URBAN INSTITUTE

I am pleased to advise that two of the Region’s partners have recently been named award recipients by the Canadian Urban Institute. The winners are the University of Waterloo Accelerator Centre and the “STEP Home” (Support to End Persistent Homelessness). Only eleven awards were made nationally.

Mr. Fred Eisenberger, President and CEO of the Canadian Urban Institute, will attend Regional Council on June 6, 2012 to present these two awards.

The Waterloo Accelerator Centre received the Global City Award “for cultivating technology entrepreneurship and transforming the Waterloo Region into a recognized cluster for innovation and commercialization within the high-technology and information communication technology (ICT) industries”. The Region of Waterloo contributed $4 million toward the construction of the building and maintains a seat on its Board of Directors.

The STEP Home program received the Innovation Award “for bringing together a collaborative of 12 programs through 10 agencies at 19 sites to provide options and supports to end persistent homelessness in Waterloo Region. The Region of Waterloo is an active member of STEP HOME and provides both planning and financial support.

An awards luncheon will also be held in Toronto on June 8, 2012. Congratulations are extended to these award winners and to their many partners throughout our community.

For additional information, please contact Rob Horne (regarding the Accelerator Centre) and Mike Schuster (regarding STEP Home).
The Planning and Works Committee recommends as follows:

1. THAT Council of the Regional Municipality of Waterloo approve the expropriation of the lands for the purposes of construction of road improvements to Bridge Street, in the City of Kitchener, in the Region of Waterloo as detailed in Report CR-RS-12-030 dated May 29, 2012 described as follows:

Fee Simple Partial Taking:

a) Part of Lots 3 and 4, South Side of Bridge Street, Peter N. Tagge Survey, Registered Plan Number 577, being Part 4, on Reference Plan 58R-17148, PIN 22712-0191(LT) (14 Bridge Street)

AND THAT staff be instructed to register a Plan of Expropriation for the property within three months of the granting of the approval to expropriate the property, as required by the *Expropriations Act;*

AND THAT the registered owners be served with a Notice of Expropriation and a Notice of Possession for the property after the registration of the Plan of Expropriation;

AND THAT if no agreement as to compensation is made with an owner, the statutory Offer of Compensation and payment be served upon the registered owners of the property in the amount of the market value of the interests in the land as estimated by the Region’s appraiser in accordance with the Expropriations Act;

AND FURTHER THAT the Regional Solicitor be authorized to discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete the transaction.

2. THAT Council of the Regional Municipality of Waterloo approve the expropriation of lands for the purpose of construction of road improvements to University Avenue, in the City of Waterloo, in the Region of Waterloo as detailed in Report CR-RS-12-029 dated May 29, 2012 described as follows:

Fee Simple Partial Taking:

a) Part of Lot 77, Registered Plan 1050, being Part 4, on Reference Plan 58R-17179, PIN 22354-0005(LT) (240 Mayfield Avenue)

b) Part of Lot 5, Registered Plan 1132, being Part 2, on Reference Plan 58R-17172, PIN 22355-0057(LT) (147 University Avenue East)
c) Part of Common Element Waterloo North Condominium Plan Number 23, being Part 6, on Reference Plan 58R-17180, PINS 23023-0001(LT) to 23023-0108(LT) (121 University Avenue East)

d) Part of Lot 2, Registered Plan 1050, being Part 1, on Reference Plan 58R-17179, PIN 22691-0047(LT) (251 Glenridge Drive)

AND THAT staff be instructed to register a Plan of Expropriation for the property within three months of the granting of the approval to expropriate the property, as required by the Expropriations Act;

AND THAT the registered owners be served with a Notice of Expropriation and a Notice of Possession for the property after the registration of the Plan of Expropriation;

AND THAT if no agreement as to compensation is made with an owner, the statutory Offer of Compensation and payment be served upon the registered owners of the property in the amount of the market value of the interests in the land as estimated by the Region’s appraiser in accordance with the Expropriations Act;

AND FURTHER THAT the Regional Solicitor be authorized to discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete the transaction.

3. THAT the Regional Municipality of Waterloo enter into a Consulting Services Agreement with MTE Consulting Ltd. to provide consulting engineering services for Detailed Design, Contract Administration and Construction Inspection Services associated with the Widening of Ira Needles Boulevard from Highview Drive to Erb Street at an upset fee limit of $259,284.00 plus applicable taxes for the design phase, with construction administration services to be paid on a time basis. [E-12-055]

4. THAT the Regional Municipality of Waterloo direct staff to enter into negotiations with AECOM for the extension of their existing agreement to include detailed design and services during construction of Phase 3 upgrades to the Kitchener WWTP as described in Report E-12-059 dated May 29, 2012 with the final agreement to be subject to Regional Council approval.

5. THAT the Regional Municipality of Waterloo amend By-law 10-030, A Sign By-law Respecting Signs on Regional Roads, to permit changes to the election sign size provisions as outlined in Report E-12-050, dated May 29, 2012;

AND FURTHER THAT the Regional Municipality of Waterloo provide the public with notice, in accordance with the Notice Policy, of the proposed amendment of By-law 10-030, A Sign By-law Respecting Signs on Regional Roads as set out in report E-12-050 dated May 29, 2012

6. THAT the Regional Municipality of Waterloo amend Traffic and Parking By-Law 06-072, as amended, to add to Schedule 16 – Lane Designation, westbound left-turn, left-turn lane on Can-Amera Parkway (Regional Road 80) at Franklin Boulevard (Regional Road 36) in the City of Cambridge, as outlined in report E-12-060, dated May 29, 2012.
7. THAT The Regional Municipality of Waterloo, with respect to the procurement of Stage 1 light rail transit (LRT) and until the date and time of final execution of the Stage 1 LRT procurement contract, require:

- That no elected official, officer or employee of the Region, shall partake in any meeting, presentation, discussion, social event or other activity with a bidder or potential bidder for Stage 1 light rail transit (LRT), or any officer, director, employee or agent of a bidder or potential bidder for Stage 1 light rail transit (LRT), if the meeting, presentation, discussion, social event or other activity relates directly or indirectly to the procurement for Stage 1 light rail transit (LRT) unless such is part of the formal procurement process; and

- That all elected officials, officers and employees of the Region shall direct any verbal or written questions or other communications in relation to the procurement for Stage 1 light rail transit (LRT) from a bidder or potential bidder for Stage 1 light rail transit (LRT), or any officer, director, employee or agent of a bidder or potential bidder for Stage 1 light rail transit (LRT), to the Director, Rapid Transit or their applicable designated alternates.

pursuant to report E-12-033, dated May 29, 2012.

8. THAT the Regional Municipality of Waterloo:

a) Accept the proposal of Hotz Environmental Services Inc. for P2012-28 Transportation and Processing of Municipal Hazardous or Special Waste (MHSW) for a one year term commencing July 1, 2012 at an estimated cost of $385,940.20 including all applicable taxes.

b) Enter into a MHSW Collection Services Agreement with Stewardship Ontario that provides for the partial reimbursement of the costs for the collection of Phase 1 materials in the Region’s MH SW diversion program, subject to approval of the Commissioner of Transportation and Environmental Services and the Regional Solicitor. [E-12-062]


10. THAT the Regional Municipality of Waterloo, in its role as the delegate of the Minister of Municipal Affairs and Housing, refer the portion of Map 5 of the City of Kitchener Official Plan located west of Fischer-Hallman Road and north of Huron Road that is subject to Deferral 3a to the Ontario Municipal Board under the provisions of Section 17(11) of the Planning Act R.S.O. 1990 and request this referral be consolidated with the Official Plan Amendment, Plan of Subdivision and Zoning By-law amendment appeals by Tru-Villa Inc. and 2040796 Ontario Limited currently the subject of Ontario Municipal Board Case No. PL090526, as described in Report P-12-062, dated May 29, 2012.

11. THAT the Regional Municipality of Waterloo Controlled Access By-law #58-87 be amended to include an emergency access on the east side of Regional Road # 58 (Fischer-Hallman Road) approximately 259 metres north of Huron Road, in the City of Kitchener as outlined in Report P-12-067, dated May 29, 2012.
12. THAT the Regional Municipality of Waterloo approve the 2012 Grand River Transit (GRT) service improvements as described in Report No. P-12-069, dated May 29, 2012, and shown in Attachments A, B and C, as summarized below:

- Extended Sunday hours of service on selected routes in Cambridge with highest anticipated ridership demands and a broad service coverage network;
- Replacement of the Route 75 SAGINAW BusPLUS 6.5m (21') mini-bus with a standard 12.2m (40') bus and expansion of existing peak period service to include weekday, midday and evening service;
- Improved service to the L.G. Lovell Industrial Park area providing two-way service and more service coverage;
- New weekday peak-period Route 76 DOON SOUTH BusPLUS service; and
- Extended weekend service on the 200 iXpress and Route 13 LAURELWOOD.

13. THAT the Regional Municipality of Waterloo approve the acquisition and installation of software upgrades, enhancements and new modules from INIT Innovations in Transportation, Inc. for Grand River Transit's computer-aided dispatch and automatic vehicle location (CAD/AVL) system at a cost not to exceed $525,000 plus applicable taxes;

AND THAT the Commissioner of Planning, Housing and Community Services be authorized to enter into such agreements with INIT Innovations in Transportation, Inc. as may be required to facilitate the implementation of the recommendations in Report P-12-070, dated May 29, 2012, with such agreements to be to the satisfaction of the Regional Solicitor.

May 29, 2012
The Planning and Works Committee recommends as follows:

1. THAT the Regional Municipality of Waterloo approve, enter into an Agreement for, and execute all documentation related to, the acquisition of land for road improvements to Weber Street West described as Part Lot 8, Plan 373 Kitchener, being 357 Weber Street West, City of Kitchener, Regional Municipality of Waterloo from Minaz Ismael and Afieda Khan for the sum of $249,000.00, plus associated acquisition costs, subject to documentation satisfactory to the Regional Solicitor.

May 29, 2012
The Administration and Finance Committee recommends as follows:

1. THAT the Regional Municipality of Waterloo approve the following options for the 2012 Property Tax Capping Program:

   a) Establish the annual limit on tax increases for properties in the commercial, industrial and multi-residential classes at the greater of ten percent (10%) of the previous year's annualized capped taxes or 5% of the previous year's current value assessment (CVA) taxes;

   b) Establish thresholds for properties in the commercial, industrial and multi-residential classes such that if the taxes on the property calculated under the capping program are within $250 of the current value assessment taxes (CVA), the CVA taxes will apply;

   c) Continue with the “Stay at CVA” option and exclude properties in the commercial, industrial and multi-residential classes that were at their Current Value Assessment taxes in 2011 from the 2012 capping and claw back program;

   d) Continue with one aspect of the “Cross CVA” option and exclude properties in the commercial, industrial and multi-residential classes that were subject to a claw back in 2011 from moving to capping in 2012;

   e) Fund the limits on tax increases for 2012 for the multi-residential, commercial and industrial classes by limiting tax decreases for properties in the same class.

   AND THAT the required by-law to establish the options for the 2012 Property Tax Capping Program be included on the June 6, 2012 Regional Council agenda;

   AND THAT the required by-law to establish 2012 claw back percentages for capped classes be included on the June 27, 2012 Regional Council agenda; [F-12-037]

   AND FURTHER THAT the Area Municipalities be notified accordingly.

2. THAT the Regional Municipality of Waterloo endorse the proposed shared use of space at the Kitchener Operation Facility (Goodrich Drive) for the Region’s Service First Call Centre; and, the offer of the use of the Region’s Customer Relationship Management (CRM) software, should Kitchener elect to do so, as outlined in report CR-CLK-12-009 dated May 29th, 2012 and as per the License Agreement and Memorandum of Understanding to be executed by the Commissioner of Corporate Resources in a form satisfactory to the Regional Solicitor.

   THAT the proposed use of the Region’s Customer Relationship Management (CRM) software as described in report CR-CLK-12-009 dated May 29th, 2012 is subject to Regional
Council awarding the proposal for the license and implementation of same to be recommended on May 29th, 2012 in a companion finance report (CR-CLK-12-012/F-12-038).

3. THAT the Regional Municipality of Waterloo accept the negotiated proposal of Kana for Customer Relationship Software in the amount of $1,181,076 including HST. [CR-CLK-12-012/F-12-038]

4. THAT the Regional Municipality of Waterloo provide the public with notice, in accordance with the Notice Policy, of the proposed revisions to the Notice Policy # 07-02 as set out in report CR-CLK-12-011 dated May 29, 2012, and bring the amended policy to the June 27, 2012 Council meeting for final approval;

AND THAT the Regional Municipality of Waterloo request the Association of Municipalities of Ontario (AMO) to lobby for a review of the prescribed notice requirements, taking into consideration the various pieces of legislation and regulations in an attempt to streamline the process and provide some autonomy for municipalities in providing public notice.

5. THAT the Regional Municipality of Waterloo repeal Execution of Documents By-Law 06-034, as amended, and pass a by-law in the form attached hereto as Appendix “A” to Report CR-RS-12-032 to amend and consolidate Execution of Documents By-Law 06-034, as amended, which governs the execution of documents and provides for delegation of execution of certain documents to certain Regional staff on behalf of the Region.

6. THAT the Regional Municipality of Waterloo approve the 2012 grants to Community Organizations as recommended by the Grants Committee and outlined in Report CC-12-001 and the attached Appendix 1 dated May 29, 2012.

7. THAT Regional staff be directed to meet with the Alliance for Children and Youth of Waterloo Region to explore possible options for project funding. [CC-12-001]

May 29, 2012
THE REGIONAL MUNICIPALITY OF WATERLOO
COMMUNITY SERVICES COMMITTEE

Summary of Recommendations to Council

The Community Services Committee recommends as follows:

1. THAT the Regional Municipality of Waterloo discontinue its International Travel Health Clinic operations as of January 1, 2014;

   AND THAT the Regional Municipality of Waterloo amend By-law 12-001, being a By-law to Establish Fees and Charges for the Regional Municipality of Waterloo, to implement the fee schedule for services provided within the Public Health’s International Travel Health Clinic effective July 1, 2012 as shown in Attachment 1 - Report PH-12-023, dated May 29, 2012.


3. THAT the Regional Municipality of Waterloo approve a three month extension of the operation of 3 overnight respite beds for Alzheimer community clients until June 30, 2012;

   AND THAT the 2012 Operating Budget for Seniors’ Services be increased by $49,000 gross and $0 net Regional Levy to be funded by St. Joseph’s Health Centre in Guelph, as outlined in report SS-12-021, dated May 29, 2012.

4. THAT the Regional Municipality of Waterloo approve the hiring of 1.6 FTE staff on a temporary basis to support the collection of fees on behalf of Waterloo Region District School Board and Waterloo Catholic District School Board effective July 1, 2012;

   AND THAT the 2012 Operating Budget for Children’s Services be increased by $28,425 gross and $0 net Regional Levy and for Finance by $22,575 gross and $0 net Regional levy to be funded by revenues resulting from the administration of fee collection for extended day kindergarten, as outlined in Report SS-12-022/F-12-039, dated May 29, 2012.

5. THAT the Regional Municipality of Waterloo approve an increase to the 2012 Operating Budget for Social Planning, Policy and Program Administration of $10,856 gross and $0 Net Regional Levy, due to an increase of $10,856 in funding through the Provincial Rent Program;

   AND THAT the Regional Municipality of Waterloo amend its current agreement with Lutherwood to provide additional one-time funding in the amount of $10,856 for the Rent Bank and Eviction Prevention Program loan fund, for the period January 1, 2012 to December 31, 2012, in a form satisfactory to the Regional Solicitor, as outlined in report SS-12-023 dated May 29, 2012.

May 29, 2012
THE REGIONAL MUNICIPALITY OF WATERLOO  
LIBRARY COMMITTEE  

Summary of Recommendations to Council  

The Library Committee recommends as follows:  

1. THAT the Regional Municipality of Waterloo request the Federal Government to reconsider its decision to end funding for the Community Access Program;  

   AND THAT the Chair of the Region of Waterloo Library Committee write to the Minister of Industry Canada and copy area Members of Parliament to provide further details, as outlined in Report P-LIB-12-002, dated May 29, 2012.  

May 29, 2012
TO: Chair Ken Seiling and Members of Regional Council

DATE: June 6, 2012

FILE CODE: D16-90(A)

SUBJECT: REVISED REGIONAL LAND BUDGET - REGIONAL OFFICIAL PLAN
ONTARIO MUNICIPAL BOARD HEARING (PHASE 1)

RECOMMENDATION:

THAT Regional Council approve the Revised Land Budget as attached to Report No. P-12-064, dated June 6, 2012, as the formal position of the Regional Municipality of Waterloo in the upcoming phase 1 of the Ontario Municipal Board hearing relating to the new Regional Official Plan.

SUMMARY:

The Regional Official Plan (ROP) was adopted by Regional Council on June 16, 2009. The adoption of the ROP was supported by a number of background technical documents, including a Land Budget prepared by Regional staff in accordance with the provisions of the Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan). This Land Budget, which was endorsed by Regional Council on April 30, 2009, was predicated on a planning horizon year of 2029 and demonstrated that no justification existed for the designation of additional land for residential development to accommodate the forecasted population to 2029.

The ROP was approved by the Ministry of Municipal Affairs on December 22, 2010, and was subsequently appealed to the Ontario Municipal Board (OMB or Board) in its entirety. On July 16, 2012, phase 1 of the hearing to adjudicate these appeals begins. This initial phase of the hearing is anticipated to run for five weeks. Over the past several weeks, Regional staff has been working with the appellants to narrow the scope of this phase of the hearing, with discussions in this regard continuing well past the deadline for reporting to Planning and Works Committee. This report is coming directly to Regional Council at this time in order that Regional Council’s decision related to the above noted recommendation is available to inform the preparation of witness statements and other documents related to this phase of the hearing. These documents are required to be filed with the OMB in the middle of June.

Since the appeals to the ROP were filed in early 2011, Regional staff has participated in six pre-hearing conferences, a formal mediation session, numerous informal mediation sessions and three motion hearings. Earlier this year, the OMB determined that a planning horizon of 2031 should be used for the purposes of assessing whether an urban expansion is required. Subsequent to this decision, Regional staff reviewed the Land Budget and revised it accordingly to extend the planning horizon to 2031 and to update various inputs associated with the analysis. The resulting Revised Land Budget (Attachment A) reflects the policies of the Council-adopted ROP, is in conformity with the Growth Plan and retains the same methodology that was supported by the Province as part of the process leading to the approval of the ROP. A summary of the changes between the original Land Budget and the Revised Land Budget is contained in Attachment B to this report.

It is the conclusion of the Revised Land Budget that, based on simple achievement of the minimum intensification targets contained in the ROP and the minimum Designated Greenfield Area density
targets established within the Growth Plan, an expansion to the urban areas of the ROP to accommodate 4,500 residents and jobs (between 80 and 100 hectares) may be justifiable based on forecasted residential growth within the 2031 planning period. The Revised Land Budget also continues to support the designation of the additional Prime Industrial/Strategic Reserve lands (on the East Side lands in the northern part of the City of Cambridge and in the Highway 401/Regional Road 97 Employment Area in the Township of North Dumfries) and lands for employment uses in the Township of Wellesley, as originally justified through the 2006 Industrial and Business Vacant Land Inventory and Demand Analysis. While future comprehensive review processes may determine that appropriate circumstances exist to justify designation of additional employment lands, no quantitative justification for such expansions exists at this time.

One of the appellants to the ROP has prepared an alternative land budget for submission to the Board. This alternative land budget was prepared on behalf of Activa Group by Altus Group (see Attachment C) and supported by a document entitled a “Land Inventory Analysis, Regional Municipality of Waterloo” prepared by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) on behalf of Activa Holdings Inc. (Attachment D). This alternative land budget seeks to justify urban area expansions of 1,298 net hectares for residential purposes. Regional staff has reviewed the alternative land budget and does not support either its methodology or its conclusions. The key differences between the Revised Land Budget and the Altus/MHBC alternative land budget are discussed in more detail in this report.

Phase 1 of the hearing begins on July 16, 2012, and is currently scheduled to run for five weeks. Through this report, Regional staff is seeking Regional Council’s approval of the Revised Land Budget as the formal position of the Region of Waterloo for phase 1 of the hearing.

REPORT:

Background

On June 16, 2009, Regional Council adopted the new Regional Official Plan (ROP) in accordance with the provisions of the Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan). The adoption of the new ROP by Regional Council was supported by a number of background technical documents including a Land Budget prepared by Regional staff in accordance with the provisions of the Growth Plan. This Land Budget, which was endorsed by Regional Council on April 30, 2009, was predicated on a planning horizon year of 2029 and demonstrated that no justification existed for the designation of additional land for residential development to accommodate the forecasted population to that time. The Land Budget also reaffirmed the findings of the 2006 Industrial and Business Park Vacant Land Inventory and Demand Analysis, which recommended the designation of additional land for Prime Industrial/Strategic Reserve purposes. This additional land was incorporated into the ROP through a combination of Regional Official Policies Plan Amendment No. 28 and the ROP as adopted by Regional Council in 2009.

Following Regional Council adoption, the ROP was forwarded to the Ministry of Municipal Affairs and Housing for approval under the provisions of the Planning Act. On December 22, 2010, the Ministry of Municipal Affairs approved the ROP. A Notice of Decision was subsequently issued by the Ministry on January 4, 2011, triggering the statutory 20 day appeal period. A total of 26 appeals were filed, including several appeals of the ROP in its entirety. As a result, the appeals of the ROP are now before the Ontario Municipal Board (OMB or Board) for adjudication. Phase 1 of the hearing to adjudicate these appeals is scheduled to begin on July 16, 2012 and is expected to run for five weeks. Over the past several weeks, Regional staff has been working to narrow the scope of this phase of the hearing, with discussions in this regard continuing well past the deadline for reporting to Planning and Works Committee. This report is coming directly to Regional Council at this time in order that Regional Council’s decision related to the above noted recommendation is available to inform the preparation of witness statements and other documents related to this phase.
of the hearing that are required to be filed with the Board in the middle of June. The methodology used in the Revised Land Budget is consistent with the methodology used in support of Council’s approval of the ROP in 2009.

Ontario Municipal Board Process to Date

Regional staff has worked diligently with the Board, the appellants and other parties to the hearing in an attempt to streamline the process through mediation, motions to the Board and negotiations with a number of parties. To date, there have been six prehearing conferences, a mediation session and three motion hearings before the Board. The first motion hearing, held October 26, 2011, addressed the issue of the party status for Wonderland Farms Limited and 1263176 Ontario Limited, a company that had not participated in the processing of the ROP, but sought to join in the hearing after it had begun. The Board refused party status to 1263176 Ontario Limited at the hearing.

On a second motion, the Board supported the Region’s proposed phasing of the hearing, including that the first phase of the hearing should address land budget related issues. As a result of this decision by the Board, the adjudication of the appeals will be heard through a series of smaller hearings rather than in one large omnibus hearing. The phases of the hearing are as follows:

i) Phase 1 - the land budget related issues, including determination if justification exists to add land to the urban areas to provide for the growth forecasts contained in Schedule 3 of the Growth Plan, as well as issues relating to:
   a) reurbanization targets;
   b) Designated Greenfield Area density targets by land use type; and
   c) the need for an urban expansion to accommodate forecasted growth within the planning horizon of the plan.

This phase of the hearing will not determine where such expansions would occur, but rather will focus on whether a need exists to expand the urban boundaries in the ROP and if so by how much.

ii) Phase 2 – The hearing of all appeals related to the policies or concepts with respect to; the prime and non-prime agricultural area policies and mapping, the natural heritage resources policies and mapping, the water resource protection policies and mapping, and the protected countryside policies and mapping that inform the development of the integrated policy structure provided for in Chapter Two (2) and the Protected Countryside section of Chapter Six (6).

There will be additional phases of the hearing to deal with:

i) allocation of population and employment forecasts to the local municipalities;
ii) allocation of additional land (if any) determined to be required through phase 1 of the hearing;
iii) general policies and mapping; and
iv) site specific issues.

The hearing of issues related to aggregate policies in the ROP is not intended to follow on a sequential basis with the rest of the hearing, but will instead be proceeding on a parallel track. Regional staff is currently participating in a mediation process involving various parties, including the Ontario Stone Sand and Gravel Association (OSSGA) the Township of Woolwich, the County of Wellington and the Province in an effort to resolve the outstanding issues.

On a third motion, the Board determined that 2031 should be used as the planning horizon year for the purposes of assessing whether an urban expansion is required. The Board decision required
Regional staff to update the original Land Budget to reflect a new planning horizon for the ROP of 2031.

Revised Land Budget

This update to the original Land Budget (the “Revised Land Budget” – Attachment A) has been prepared to comply with the decision of the Board, to address issues raised during the review of the Land Budget since its adoption by Regional Council, and to update the analysis to include the most up-to-date statistics available. A summary of the changes between the original Land Budget and the Revised Land Budget is contained in Attachment B to this report. No changes have been made or are proposed to be made to any of the density or intensification targets contained within the ROP policies as adopted by Regional Council.

As part of this update, it has been determined that, based on simple achievement of both the minimum intensification targets contained in the ROP and the minimum Designated Greenfield Area density targets established within the Growth Plan, an expansion to the urban areas of the ROP to accommodate 4,500 residents and jobs (between 80 and 100 hectares) may be justifiable based on forecasted residential growth within the 2031 planning period. This additional need for land is almost entirely the result of the extension of the planning horizon by the Board from 2029 to 2031 and an increase in the projected number of students requiring housing in regular dwelling units.

The Revised Land Budget continues to support the designation of the additional Prime Industrial/Strategic Reserve lands (on the East Side lands in the northern part of the City of Cambridge and in the Highway 401/Regional Road 97 Employment Area in the Township of North Dumfries) and lands for employment uses in the Township of Wellesley as originally justified through the 2006 Industrial and Business Vacant Land Inventory and Demand Analysis. While future comprehensive review processes may determine that appropriate circumstances exist to justify designation of additional employment lands, no quantitative justification for such expansions exists at this time.

Alternative Land Budget Submitted by Altus Group/MHBC on Behalf of Activa Group/Activa Holdings Inc.

On April 23, 2012, Regional staff received a copy of an alternative land budget prepared on behalf of Activa Group by Altus Group (Attachment C) and supported by a document entitled a “Land Inventory Analysis, Regional Municipality of Waterloo” prepared by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) on behalf of Activa Holdings Inc. (Attachment D). This alternative land budget seeks to justify urban area expansions of 1,298 net hectares for residential purposes. The area proposed for expansion is expected to further increase as a result of the recent identification of additional habitat of an Endangered and Threatened Species by the Ministry of Natural Resources on lands that had previously been considered to be developable.

The Region’s Revised Land Budget and the Altus Group/MHBC alternative land budget differ in more ways than just the results of the justification calculations. The two documents are prepared using very different methodologies. The Revised Land Budget has been prepared using a methodology focused on achievement of intensification and density targets in conformity with the provisions of the Growth Plan. The methodology used by the Region in the Revised Land Budget was supported by the Province as part of the process leading to the approval of the ROP.

The Altus Group/MHBC alternative land budget has been prepared using a methodology issued by the Ministry of Municipal Affairs and Housing in 1995 entitled: Projection Methodology Guideline: a Guide to Projecting Population, Housing Need, Employment and Related Land Requirements, which utilizes a housing-by-type forecast to justify urban expansions.
Other areas of significant variation between the Region’s Revised Land Budget and the Altus Group/MHBC alternative land budget include:

i) Altus Group/MHBC has excluded approximately 410 hectares of land over and above that specifically identified by the Growth Plan as being eligible for such exclusion. It is the opinion of Regional staff that exclusion of these additional lands does not conform to the provisions of the Growth Plan (Growth Plan Policy 2.2.7.3).

ii) Altus Group/MHBC utilizes projections for future development on existing designated lands that are lower than those used by Regional staff.

iii) Altus Group/MHBC proposes the deletion of a total of 178.42 hectares of currently designated urban land to facilitate urban expansions onto lands elsewhere in the region. The proposed deletions apply to the Elmira, Baden and Ayr Township Urban Areas and the Breslau portion of the Urban Area. While the ROP provides the potential for the Townships to rationalize their respective Township Urban Area boundaries, any such rationalizations (both related exclusions and expansions) must occur within the Township. Transfer of lands to other local municipalities is neither contemplated nor authorized by the applicable policies. A similar policy framework applies to the Urban Area boundary in the vicinity of the Breslau Area of Woolwich Township. The proposed transfer of land from the Township Urban Areas or the Urban Area in the vicinity of Breslau to other locations in the region not conforming to the provisions of current ROP policy is not supported by Regional staff.

iv) Altus Group/MHBC has excluded lands in the City of Cambridge Urban Area (56 hectares) and the Elmira Township Urban Area (13.78 hectares) from the calculation of otherwise developable land, as in their opinion, these parcels will not be developable within the 2031 planning horizon due to servicing constraints (East Cambridge) or policy considerations (Elmira Township Urban Area). Regional staff does not share this opinion that the lands are not developable within the planning period of the ROP and the Revised Land Budget considers these lands as being potentially developable accordingly.

v) Altus Group/MHBC use a housing-by-type forecast to justify additional urban expansions for lower density units (single-detached, semi-detached and row housing), while substantial areas of the Residential Designated Greenfield Area planned for other types of units remain vacant throughout the planning period. The Growth Plan policies are intended to be achieved within the life of the Growth Plan (2031). In addition, the Growth Plan requires the development of “... a range of housing types and densities to support the achievement of the intensification target and the density targets” (Growth Plan Policy 3.2.6.6). It is the intention of the Growth Plan that housing types will be fitted to the urban area, not that the urban area will be fitted to the housing types. As a result, it is the opinion of Regional staff that the use of a housing-by-type forecast as the basis to justify urban area expansions of the ROP does not conform to the provisions of the Growth Plan.

vi) As part of their calculations, Altus Group/MHBC has projected average densities of 51.5 jobs per hectare on Industrial Parks, Business Parks and major retail areas within the Designated Greenfield Area. By comparison, the 2006 Industrial and Business Park Vacant Land Inventory and Demand Analysis reported that on average, existing Industrial and Business Parks within the Region of Waterloo had densities of just under 30 jobs per hectare. While the inclusion of major retail areas into the analysis will increase the density, its inclusion could reasonably be expected to result in only a nominal increase in the average density of jobs per hectare, as major retail represents a relatively small portion of the Employment Designated Greenfield Area. Accordingly, the projected average densities for Employment Designated Greenfield Areas used by Altus Group/MHBC are not reasonable and cannot be supported by Regional staff.
v) Altus Group/MHBC forecast an increase in the number of students requiring regular dwellings of 17,500 within the planning period. The corresponding Regional forecast is 9,100. This Regional forecast was recently developed in direct consultation with the staff responsible for such projections at the University of Waterloo, Wilfrid Laurier University and Conestoga College.

As occurred during the planning horizon motion hearing, Regional staff anticipates that experiences in other jurisdictions will be advanced by the appellants in phase 1 of this hearing. In reviewing land budgets prepared by other municipalities and approved by the Province, it is clear that the Province has not been consistent in its interpretation of the Growth Plan, with varying interpretations of the issue addressed in i) above being a prime example. In some jurisdictions, the Province appears to have supported a much greater range of exclusions than is provided for in the Growth Plan. However, throughout the processing of the ROP, Provincial staff has also been consistently supportive of Regional staff’s interpretation of conformity with respect to the application of the applicable Growth Plan policies. While conformity with the Growth Plan is required by the provisions of the Planning Act, the interpretation of the Growth Plan as recommended by Regional staff also remains consistent with the fundamental planning principles on which the ROP (as approved by Regional Council in 2009) is based.

As additional context, three years before the Growth Plan came into effect, Regional Council adopted the Regional Growth Management Strategy (RGMS) to guide future growth in the Region. The RGMS promoted intensification and increased densities as a means to reduce the outward movement of the urban area. These were important measures required to protect local and regional groundwater sources, preserve agricultural land, protect the natural environment, make better use of existing infrastructure, promote alternative modes of transportation, reduce suburban traffic congestion and increase the overall health of the residents of this community. The interpretation promoted by Altus Group and MHBC in i) above would have the impact of permitting an expansion of the urban area out onto the equivalent of slightly more than 10 average size farms here in the Region of Waterloo.

While some developers argue that if they cannot build on it, then it should not count towards the density targets, it is important to remember that the densities provided within the Growth Plan were intended to be average densities applied to all areas except the provincially constrained environmental areas (Growth Plan Policy 2.2.7.3). The authors of the Growth Plan fully anticipated that some lands not identified as provincially constrained environmental areas would be unbuildable. However, through the use of the average density targets chosen, the author’s of the Growth Plan also anticipated that the lack of density on such lands could reasonably be compensated for through the attainment of higher than average densities on others. To date, this is what is being experienced within the Region of Waterloo as demonstrated through the following section of this report (also see Appendix ‘E’).

Experiences to Date

Since the coming into force of the Growth Plan on June 16, 2006, and the subsequent adoption of the ROP three years later, Regional staff has been monitoring the implementation process associated with the Growth Plan’s intensification and minimum density targets. A brief summary of the results of this monitoring is provided in E to this report. This monitoring demonstrates that the Region remains on track to achieve the densities and intensification targets set out in the ROP policies as adopted by Regional Council.
Conclusions / Recommendation

Phase 1 of the hearing begins on July 16, 2012, and is currently anticipated to run for five weeks. Through this report, Regional staff is seeking Regional Council’s approval of the Revised Land Budget as the formal position of the Region of Waterloo for phase 1 of the hearing.

Area Municipal Consultation/Coordination

Regional staff has met with local municipal staff to present and discuss the Revised Land Budget. Changes resulting from these discussions have been incorporated into the document as appropriate. Regional staff will continue to discuss a number of issues with local municipal staff leading up to this and the subsequent phases of the hearing to ensure coordination is maintained throughout this process.

CORPORATE STRATEGIC PLAN:

The actions described in this report are consistent with the 2011 - 2014 Strategic Plan Strategic Objectives: 1.1 Integrate environmental considerations into the Region’s decision-making, 1.4 Protect the quality and the quantity of our drinking water sources, 1.5 Restore and preserve green space, agricultural land and sensitive environmental areas, and 2.1 Encourage compact, livable urban and rural settlement form.

FINANCIAL IMPLICATIONS:

Costs associated with the OMB hearing process are currently being provided from funds budgeted for such purposes. Regional staff will be providing a comprehensive update to Regional Council in the near future regarding a broad range of OMB processes and financial issues relating to on-going and longer term participation in this and other hearings will be further addressed at that time.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from various Regional Departments/Divisions including Clerks, Legal, Finance and Transportation and Engineering Services have been consulted throughout the hearing process and will continue to play key roles in assisting the Region in representing the Council-adopted ROP as the hearing continues.

ATTACHMENTS:

Attachment A – Region’s Revised Land Budget
Attachment B – Comparison of the April 2009 Land Budget with the Revised Land Budget
Attachment C – Waterloo Region Land Budget, Altus Group (April 23, 2012)
Attachment D – Land Inventory Analysis, Regional Municipality of Waterloo, MHBC (April 2012)
Attachment E – Experiences to Date in Meeting the ROP Intensification and Density Targets in the Region of Waterloo

PREPARED BY: Kevin Eby, Director, OMB Appeals

APPROVED BY: Rob Horne, Commissioner of Planning, Housing and Community Services
Attachment A

Region of Waterloo

Revised Land Budget

(June 6, 2012)

Prepared in support of the Regional Official Plan
2009 – 2031
Index

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1.0 Introduction

On June 16, 2006, the Province of Ontario (Province) approved the Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan). The Growth Plan set a new direction for the Greater Golden Horseshoe (GGH) and how cities, towns and villages within the GGH will develop into the future. The Growth Plan is a forward looking document that seeks to address significant planning challenges arising from the historic patterns of growth within the GGH. This is not a Growth Plan that promotes more of the same. Instead it seeks to directly address some of the challenges facing the GGH. These challenges are clearly laid out in Section 1.1 of the Growth Plan.

“The GGH must remain competitive with the other city-regions. However, urban sprawl can affect its competitiveness. Despite its many assets, Ontario and the GGH face a number of challenges in sustaining and growing its economy:

- Increasing numbers of automobiles are traveling over longer distances resulting in clogged transportation corridors, including those that provide access to our critical border crossings. Traffic congestion, and the delay in movement of goods costs Ontario upwards of $5 billion in lost GDP each year;
- Attractive and efficient public transit is difficult to introduce into sprawling communities, and this limits our ability to respond effectively to growing traffic congestion issues;
- Employment lands are being converted from their intended uses, thereby limiting future economic opportunities;
- New infrastructure is being built to service lower-density areas, while existing infrastructure in older parts of our communities remains underutilized;
- Urban sprawl contributes to the degradation of our natural environment, air quality and water resources, as well as the consumption of agricultural lands and other natural resources so critical to the future economy.”

The Growth Plan provides clear and specific policy direction on how the Province and municipalities are to address the challenges facing the GGH. As stated in Section 1.1:

“This Plan addresses these challenges through policy directions that -

- direct growth to built-up areas where the capacity exists to best accommodate the expected population and employment growth, while providing strict criteria for settlement area boundary expansions [emphasis added]
- promote transit-supportive densities and a healthy mix of residential and employment land uses
- preserve employment areas for future economic opportunities
- identify and support a transportation network that links urban growth centres through an extensive multi-modal system anchored by efficient public transit, together with highway systems for moving people and goods
- plan for community infrastructure to support growth
- ensure sustainable water and wastewater services are available to support future growth
- identify natural systems and prime agricultural areas, and enhance the conservation of these valuable resources
- support the protection and conservation of water, energy, air and cultural heritage, as well as integrated approaches to waster management.”
With the coming into effect of the Growth Plan, the Province established a new set of rules, described in Section 1.1 as “providing strict criteria for settlement area boundary expansions”, which direct how expansions to settlement areas within the GGH will be considered. The objectives of the policy framework of the Growth Plan are described in Chapter 2 – Where and How to Grow, Section 2.1 - Context of the Growth Plan which states:

“It is important to optimize the use of the existing land supply to avoid over-designating new land for future development. This Plan’s emphasis on intensification and optimizing the use of the existing land supply represents a new approach [emphasis added] to city-building in the Greater Golden Horseshoe, one which concentrates more on making better use of our existing infrastructure, and less on continuously expanding the urban area.”

All decisions relating to Planning Act applications, and all municipal planning exercises within the GGH, including the preparation of official plans, must conform to the Growth Plan. The Growth Plan was prepared and needs to be read in conjunction with the 2005 Provincial Policy Statement (PPS) and the Greenbelt Plan. In the event of conflict between these Provincial documents, the Growth Plan prevails to the extent of any conflict, the one exception being where the policies of the other documents speak to protection of the natural environment or human health. In such a case, the policies that provide more protection to the natural environment or human health prevail. The key policies applicable to the preparation of a Land Budget in accordance with the provisions of the Growth Plan are contained in Appendix ‘A’.

In keeping with the requirements of the Places to Grow Act, 2005, the Council of the Regional Municipality of Waterloo (Region) adopted a new Regional Official Plan (ROP) on June 16, 2009. The new ROP represents Regional Council’s interpretation of conformity with the Growth Plan and the Greenbelt Plan, and consistency with the Provincial Policy Statement within the context of the Region of Waterloo. The development of the new ROP was informed by a number of background documents including a Land Budget (April 2009). The purpose of the Land Budget is to determine whether justification exists to permit the addition of new land to the urban settlement areas of the ROP to accommodate growth forecasted within the planning horizon.

Prior to the coming into effect of the Growth Plan, determination of the need and justification for expansions to settlement areas in Ontario was governed through the provisions of the Provincial Policy Statement (PPS), and primarily utilized a methodology contained in a document issued by the Ministry of Municipal Affairs and Housing in 1995 entitled: Projection Methodology Guideline: a Guide to Projecting Population, Housing Need, Employment and Related Land Requirements. This document was prepared to provide guidance in the implementation of the Comprehensive Set of Policy Statements in effect at that time. However, much has changed since this document was prepared. Since that time, there have been two major revisions to the PPS issued by the Province (1996 and 2005), as well as major changes to the Planning Act, the adoption of the Greenbelt Act and Places to Grow Act, and the coming into effect of the Greenbelt Plan and the Growth Plan, which have collectively substantially changed the rules that govern planning and development in the GGH.

It is also important to note that with the coming into effect of the Growth Plan, the Province also:

- provided specific population and employment forecasts for each upper- and single-tier municipality, including the Region of Waterloo, in Schedule 3;
- delineated the area within each single- and upper-tier municipality to be considered as Designated Greenfield Area and built-up area through the issuance of a “built boundary”;
- established Urban Growth Centre designations;
- established and mandated conformity to Designated Greenfield Area and Urban Growth Centre minimum density targets; and
established and mandated conformity to minimum intensification targets (intensification being development within the built boundary).

None of these provisions, which constitute or replace the majority of inputs into the way land budgets were traditionally prepared, existed before the Growth Plan, as no similar specific direction was previously provided to municipalities on these matters through the Planning Act, the PPS or other applicable policy documents. The provisions of these inputs is part of what the Growth Plan describes as “strict criteria for settlement area boundary expansions”, which “represents a new approach” to city building. As a result, while it may continue to provide some limited guidance on various aspects of the Land Budget process, the methodology outlined in the Projection Methodology Guideline is no longer the applicable methodology to be used in the creation of land budgets for the purposes of implementation of the policies of the Growth Plan. Simply put, the rules have changed. Today, it is conformity with the “strict criteria” provided through the policies of the Growth Plan that is the test governing the determination of whether justification exists to expand the urban settlement areas of the ROP.

The Ontario Municipal Board (OMB or Board) has recently ruled that conformity with the Growth Plan requires municipalities in the GGH to utilize both a planning horizon year of 2031 and the precise growth forecasts contained within Schedule 3 of the Growth Plan. This Revised Land Budget has been prepared to comply with the decision of the Board, resolve issues raised during the review of the Land Budget since its original acceptance by Regional Council and to revise the analysis to include the most up-to-date statistics available (year end 2011). A comparison of the April 2009 Land Budget and the May 2012 Revised Land Budget is contained within Appendix ‘C’.

It is important to note that this is not the only opportunity to provide additional land to accommodate development occurring between now and 2031. In accordance with the provisions of the Planning Act, the new ROP (and by extension corresponding background documents such as the Regional Land Budget) is to be reviewed every five years after the date the ROP comes into effect. As a result, a minimum of three such mandated reviews will occur before the 2031 planning horizon of the new ROP expires. Future changes in assumptions, market conditions and legislation can be reviewed through these processes and appropriate amendments to the ROP can be considered at that time.

This version of the Revised Land Budget represents an update from the version released in March 2012. The changes to this version do not in any way change the methodology used from previous versions of the land budget. As a result of comments received regarding the previous version of the Revised Land Budget cross references to assist in understanding the flow of the analysis have been provided, as has additional explanatory material. In several steps of the analysis assumptions have also been adjusted based on input received through the meetings of experts and other stakeholders as well as updated information.
2.0 **Land Budget Analysis Parameters**

The following are the key analysis parameters arising from the policy direction contained within the Growth Plan that need to be addressed and considered as part of the Land Budget.

2.1 **Geographic Area of the Analysis**

Policy 2.2.8.2 a) of the Growth Plan regulates the geographic area to which the justification analysis applies. The first test of Policy 2.2.8.2 a) is that expansions may only occur when land is unavailable within the "regional market area" to accommodate forecasted growth. The Glossary in the Growth Plan describes the "regional market area" as an area that has a high degree of social and economic interaction and in Southern Ontario in particular, as normally being the area of the upper- or single-tier municipality. Consistent with the Growth Plan, the Region of Waterloo will be considered the regional housing market area for the purposes of the analysis.

The test provided in Policy 2.2.8.2 a) of the Growth Plan first requires there to be a lack of sufficient opportunities to accommodate growth at the ‘regional market level’ (determined above to be the Region of Waterloo) before any expansions can be considered. As a result, the analysis contained in the Land Budget initially addresses the need at the regional scale. If there is found to be a lack of sufficient capacity, consistent with the policies of the Growth Plan, the analysis will be expanded through a separate process to address which of the Area Municipalities requires additional land to be added to their respective urban settlement areas.

2.2 **Planning Horizon**

The Ontario Municipal Board has ruled that conformity with the Growth Plan requires the Region to use 2031 as the planning horizon for the ROP. As part of the planning horizon motion hearing, it became apparent that one of the major concerns of the appellants was with the Region’s variation from 2031 related to the resulting lack of alignment with the future census year of 2031. As a result, the planning period for the Land Budget has been adjusted specifically to align with the census, that being from mid year 2006 to mid-year 2031.

2.3 **The Built Boundary**

The built boundary is defined by the glossary in the Growth Plan as being:

“The limits of the developed urban area as defined by the Minister of Public Infrastructure Renewal”.

On April 2, 2008, the Ministry of Public Infrastructure Renewal (now the Ministry of Energy and Infrastructure)
2.4 The Built-Up Area

The Built-Up Area is defined by the Growth Plan as the area inside of the built boundary. This is the area within which the Growth Plan establishes minimum intensification targets to be achieved within the Growth Plan’s 2031 planning horizon. The built-up area for the purposes of this land budget is as illustrated on Appendix ‘A’.

2.5 The Designated Greenfield Area

In accordance with the provisions of the Growth Plan, the Designated Greenfield Area is defined as:

“The area within a settlement area that is not built-up area. Where a settlement area does not have a built boundary, the entire settlement area is considered designated greenfield area.”

For the purposes of the Revised Land Budget, the “settlement area” referred to in the definition of Designated Greenfield Area will consist of the lands designated as Urban Area, Township Urban Area and the Highway 401/Regional Road 97 Employment Area within the ROP. For the purposes of measuring the Designated Greenfield Area, the external boundary of the urban designation in the ROP shall be as per the interpretation of such boundaries included within Policy 10.C.7 (b) of the ROP (centre line of the road or feature).

The Designated Greenfield Area for the purposes of this land budget is as illustrated on Appendix ‘A’.

Given their extremely limited capacity for new development, and the fact they are primarily privately serviced, Rural Settlement Areas and/or Industrial/Commercial Areas that have not been assigned a built boundary by the Province are not considered to contain any Designated Greenfield Area.

The Growth Plan states that the Designated Greenfield Area will be planned to achieve a minimum density target. The Growth Plan’s Designated Greenfield Area density target applies to all lands within the Designated Greenfield Area net of provincially constrained environmental areas as defined in Section 3.5 below. The Growth Plan does not allow other areas of land that may otherwise be undevelopable due to existing development, the lack of existing or planned infrastructure, or environmental constraints (e.g. locally significant woodlots, wetlands and parkland) to be exempt from the density target in the Designated Greenfield Area. As a result, developable land will have to achieve a density higher than the overall average density target to compensate for density that cannot be accommodated on otherwise undevelopable land not meeting the test of a provincially constrained environmental area as provided for in the Growth Plan.

Similar to undevelopable land not meeting the test of a provincially constrained environmental area, where certain categories of development within the Designated Greenfield Area (such as privately serviced non-residential land) cannot meet the density target, then the density of another category needs to be increased accordingly to compensate for it in order to achieve the Designated Greenfield Area density target overall.
While specific plan of subdivision applications (pending, draft approved and registered) existing as of June 16, 2006, are exempted from the provisions of the Growth Plan by the Places to Grow Act, the lands associated with these plans remain as part of the lands to which the density target applies as provided for in the Growth Plan. As a result, any density compensation associated with the existence of these plans needs to be made up on the remainder of the remaining Designated Greenfield Area. Therefore, the actual density which must be achieved on the developable portion of the region’s Designated Greenfield Area will be higher than the overall average density target established by the Province.

2.6 Provincially Constrained Environmental Areas

Provincially constrained environmental areas refer to natural features found in the Designated Greenfield Area where the feature is both identified in an applicable official plan or Provincial plan, and where the applicable Provincial plan or policy statement prohibits development in the feature. The area of these features will be considered provincially constrained environmental area and will be removed from the Designated Greenfield Area to which the density target will be applied. For the purpose of the Revised Land Budget, these features are defined as:

a) Environmentally Sensitive Policy Areas (as designated by the ROPP);
b) Provincially Significant Wetlands (as identified by MNR);
c) Provincially Significant Woodlands (woodlands > 4 hectares in size);
d) Significant Valleys (includes the floodplains of the Grand, Conestogo, Speed and Nith Rivers); and
e) Habitat of Threatened and Endangered Species (as identified by MNR).

2.7 Sensitivity Analysis

As part of the analysis process, Regional staff performed a sensitivity analysis on a total of 12 potential combinations anchored on various PPU rates for new dwelling units within the built-up area and various rates of decline within the existing housing stock. The results of this analysis are presented in Tables 1 - 4.

For the purposes of this Revised Land Budget, Regional staff has selected one such scenario (Scenario 5) for the purposes of illustrating the methodology associated with the analysis. The results of the analysis associated with this scenario are presented in Sections 3 through 6 below. While this represents the preferred option of Regional staff, there are several combinations of factors that achieve similar results from a similar perspective. Scenario 1 (built-up area average PPU of 1.9 and decline in existing housing stock of 16,000), Scenario 5 – Regional staff’s preferred scenario (built-up area average PPU of 2.05 and decline in existing housing stock of 24,000) and Scenario 9 (built-up area average PPU of 2.2 and decline in existing housing stock of 32,000) all result in PPU values for the Designated Greenfield Area in the 2.77 to 2.81 range. A Residential Designated Greenfield Area PPU in this range would potential permit the development of suburban areas with a mix of units similar to what exists today in the plans of subdivisions for such area currently in process in the Region of Waterloo.
### Sensitivity Analysis of PPU Projections for Residential Units within the Residential Designated Greenfield Area and within the Built Boundary - Net Population Increase of 253,220

(decline of 16,000 in the population within the existing housing stock)  
( Table 1)

<table>
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<tr>
<th>Average Reurb. Rate</th>
<th>Household Forecast</th>
<th>Overall PPU New Dev.</th>
<th>PPU Reurb Units</th>
<th>PPU Greenfield Units</th>
<th>Pop'n in Greenfield</th>
<th>Pop'n Related Emp.</th>
<th>Collectives</th>
<th>Undercount</th>
<th>Total Greenfield P&amp;J</th>
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### Sensitivity Analysis of PPU Projections for Residential Units within the Residential Designated Greenfield Area and within the Built Boundary - Net Population Increase of 261,220

(decline of 24,000 in the population within the existing housing stock)  
( Table 2)

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<th>PPU Greenfield Units</th>
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### Sensitivity Analysis of PPU Projections for Residential Units within the Residential Designated Greenfield Area and within the Built Boundary - Net Population Increase of 267,221

(decline of 32,000 in the population within the existing housing stock)  
( Table 3)

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<td>2.53</td>
<td>2.2</td>
<td>2.81</td>
<td>159,099</td>
<td>21,425</td>
<td>2,766</td>
<td>5,542</td>
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### Sensitivity Analysis of PPU Projections for Residential Units within the Residential Designated Greenfield Area and within the Built Boundary - Net Population Increase of 267,221

(decline of 40,000 in the population within the existing housing stock)  
( Table 4)

<table>
<thead>
<tr>
<th>Average Reurb. Rate</th>
<th>Household Forecast</th>
<th>Overall PPU New Dev.</th>
<th>PPU Reurb Units</th>
<th>PPU Greenfield Units</th>
<th>Pop'n in Greenfield</th>
<th>Pop'n Related Emp.</th>
<th>Collectives</th>
<th>Undercount</th>
<th>Total Greenfield P&amp;J</th>
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<td>10 45%</td>
<td>102850</td>
<td>2.61</td>
<td>1.9</td>
<td>3.19</td>
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<td>22,037</td>
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<td>3.07</td>
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<td>21,843</td>
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<td>21,649</td>
<td>2,766</td>
<td>5,662</td>
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3.0 Land Budget Demand Analysis

The residential and employment demand for Designated Greenfield Area can be determined through a 14 step process. For the purposes of this Revised Land Budget, two additional steps have been included to provide context around the form of development necessary to achieve the results arising from the analysis. The following steps are included in the demand analysis process and are outlined in more detail later in this section:

Step 1 – Determine the Total Population to be Housed in New Regular Dwelling Units
Step 2 – Determine the Total Number of New Regular Dwelling Units
Step 3 – Determine the Average PPU Value for New Regular Dwelling Units *
Step 4 – Determine the Number of New Regular Dwelling Units within the Built-up Area
Step 5 – Determine the Average PPU Value for New Regular Dwelling Units in the Built-up Area *
Step 6 – Determine the Population to be Housed in New Regular Dwelling Units in the Built-up Area *
Step 7 – Determine the Number of New Regular Units within the Designated Greenfield Area
Step 8 – Determine the Population to be Housed in New Regular Dwelling Units in the Designated Greenfield Area *
Step 9 – Determine the Average PPU Value for New Regular Dwelling Units in the Designated Greenfield Area *
Step 10 – Determine the Work at Home Employment in the Designated Greenfield Area
Step 11 – Determine the Population Serving Employment in the Designated Greenfield Area
Step 12 – Determine the Total Residential Designated Greenfield Area Demand Not Including Undercount
Step 13 – Adjust for Designated Greenfield Area Portion of the Residential Undercount
Step 14 – Determine Total Employment Designated Greenfield Area Demand

* Not including undercount. An adjustment for the undercount in the DGA is provided for in Step 13.
** The results of these steps are not used in the calculation methodology, but are provided for context purposes for the reader.

3 – Step 1 Determine the Total Population to be Housed in New Regular Dwelling Units

One of the key inputs into the determination of whether additional land is required is the number of people that need to be housed in new regular dwelling units. The total population to be housed in new dwellings includes population from a number of different sources, including:

a) the net increase in population as forecast by the Growth Plan. (see Input Glossary No. 1: Census Based Forecast for use in Household Forecast and Associated PPUs);
b) the decline in population in existing dwellings due to changing demographics of the population living in these dwellings (see Input Glossary No. 2: Population Decline in Existing Dwellings);
c) the population displaced by demolitions of existing dwelling units to be replaced with new units or to facilitate intensification (see Input Glossary No. 3: Demolitions); and
d) net increase in population of new non-census students in regular dwellings (see Input Glossary No. 4: Revised Student Forecast).

The total population to be housed in new regular dwellings does not include the future population living in collectives, as collectives are not considered as regular dwellings. However, the net increase in people living in collectives from 2006 to 2031 is included as part of the reported 2006 Census population and the 2031 Growth Plan forecast, and as such, the net increase in people living in collectives over this time period needs to be
subtracted in order to properly calculate the number of people to be housed in regular dwelling units (see Input Glossary No. 5: Treatment of Collectives Within the Demand Analysis).

**Calculation Methodology**

population forecast from Schedule 3 of the Growth Plan net of the applicable 4% undercount factor - census population from 2006 + population decline in existing dwellings + population displaced by demolition of existing dwelling units + net increase in population of new non-census students in regular dwellings - net increase in residents to be housed in collectives = residents to be housed in new regular dwelling units

\[
700,961 - 478,121 + 24,000 + 5,280 + 9,100 - 8300 = 252,920 \text{ residents}
\]

**Total Number of Residents to be Housed in New Regular Dwelling Units = 252,920 residents** (carried forward to 3-S3 and 3-S8)

**3 – Step 2  Determine the Total Number of New Regular Dwelling Units**

One of the other key inputs into the determination of the need for more land to accommodate forecasted development is the number of new regular dwelling units required to accommodate the population to be housed in new regular dwelling units. The result of this calculation is required as an input into the new regular dwelling units in the built-up area. New regular dwelling units are required to house three separate groups of residents, including:

a) people migrating to the region or forming new households within the region (see Input Glossary No. 6: Net Increase of 98,3500 Households from 2006 to 2031);

b) people displaced as a result of demolition of existing dwellings to make way for new development (see Input Glossary No. 3: Demolitions); and

c) the net increase in students not living at home or in university residences (see Input Glossary No. 4: Revised Student Forecast).

**Calculation Methodology**

regular dwelling units to accommodate new households + replacement of existing dwelling units demolished + regular dwelling units to accommodate new non-census students in regular dwellings = total number of new regular dwelling units required

\[
98,350 + 2,000 + 2,500 = 102,850 \text{ dwelling units}
\]

**Total Number of New Regular Dwelling Units = 102,850** (carried forward to 3-S3 and 3-S4)

**3 – Step 3  Determine the Average PPU Value for New Regular Dwelling Units**

number of residents to be housed in new dwelling units (from 3-S1) / total number of new dwelling units (from 3-S2) = average PPU for new dwelling units

\[
252,920 / 102,850 = 2.46
\]
Average PPU Value for New Dwelling Units = 2.46 (not used further in the analysis)

3 – Step 4  Determine the Number of New Regular Dwelling Units within the Built-up Area

The percentage of new regular dwelling units in the built up area comes directly from the implementation of the policy requirement contained in the ROP that by 2015 and each year thereafter a minimum of 45% of all residential development occurring annually within the region as a whole will be constructed within the built-up area. The period between 2006 and 2015 was intended as a phase-in period. However, this land budget assumes a 45% average intensification rate will occur throughout the entirety of the planning period. (see Input Glossary No. 7: 45% Intensification Rate Throughout the Planning Period).

**Calculation Methodology**

average annual intensification target x total number of new regular dwelling units (from 3-S2) = number of new regular dwelling units within the built-up area

\[ 0.45 \times 102,850 = 46,282 \]

New Regular Dwelling Units within the Built-up Area = 46,282 (carried forward to 3-S6 and 3-S7)

3 – Step 5  Determine the Average PPU Value for New Regular Dwelling Units in the Built-up Area

Once the number of new regular dwelling units within each of the built-up area and the Designated Greenfield Area has been established, a PPU value needs to be established for one of these two areas so the distribution of the future population can be determined. Given the nature of the development that can be expected within the built-up area (the vast majority will be apartment units), this is the value with the least potential variation in the mix of housing and therefore the one that can be predicted with the highest level of certainty. For the purposes of this Land Budget calculation, a PPU value of 2.05 is proposed for the built-up area (see Input Glossary No. 8: 2.05 for Intensification Units). A sensitivity analysis is provided in Tables 1 - 4 that provides the results for PPU values above and below the value used herein.

Average PPU for New Regular Dwelling Units within the Built-up Area = 2.05 (carried forward to 3-S6)

3 – Step 6  Determine the Population to be Housed in New Regular Dwelling Units in the Built-up Area

This step is required to establish the number of people anticipated to live in new developments within the built-up area. This is then used to calculate the corresponding population to be housed in new regular dwelling units in the Designated Greenfield Area.
Calculation Methodology

number of new regular dwelling units within the built-up area (from 3-S4) x average PPU for new regular dwellings within the built-up area (from 3-S5) = population to be housed in new regular dwelling units in the built-up area

46,282 x 2.05 = 94,878 residents

Population to be Housed in New Regular Dwelling Units in the Built-up Area = 94,878 (carried forward to 3-S8)

3 – Step 7  Determine the Number of New Regular Dwelling Units within the Designated Greenfield Area

The number of new regular dwelling units required within the Designated Greenfield Area can then be calculated by subtracting the number of such units planned for the built-up area from the total number of new regular dwelling units required to house the forecasted population).

Calculation Methodology

number of new regular dwelling units (from 3-S2) - new regular dwelling units within the built-up area (from 3-S4) = the number of new regular dwelling units within the Designated Greenfield Area

102,850 - 46,282 = 56,568

New Regular Dwelling Units within the Designated Greenfield Area = 56,568 (carried forward to 3-S9)

3 – Step 8  Determine the Population to be Housed in New Regular Dwelling Units in the Designated Greenfield Area

The number of people anticipated to be housed in new regular dwelling units in the Designated Greenfield Area is then determined by subtracting the population to be housed in new regular dwelling units in the built-up area from the total to be housed in new development.

Calculation Methodology

total population to be housed in new regular dwelling units (from 3-S1) - population to be housed in new regular dwelling units in the built-up area (from 3-S6) = population to be housed in new regular dwelling units in the Designated Greenfield Area

252,920 – 94,878 = 158,042

Population to be Housed in New Regular Dwelling Units in the Designated Greenfield Area = 158,042 (carried forward to 3-S9 and 3-S12)
3 – Step 9  Determine the Average PPU Value for New Regular Dwelling Units in the Designated Greenfield Area

The average PPU for development within the Designated Greenfield Area is then calculated by dividing the population to be housed in the Designated Greenfield Area in regular dwellings by the number of new regular dwelling units within the Designated Greenfield Area. (see Input Glossary No. 9: 2.79 Average PPU for Designated Greenfield Area Residential Dwelling Units)

NOTE: this value is not used further in the calculation process, but is provided as a reference point to analyze the associated mix of housing that could be anticipated to occur within the Designated Greenfield Area.

**Calculation Methodology**

\[
\text{PPU for New Regular Dwelling Units within the Designated Greenfield Area} = \frac{\text{population to be housed in new regular dwelling units in the Designated Greenfield Area (from 3-S8)}}{\text{number of new regular dwelling units in the Designated Greenfield Area (from 3-S7)}} = 2.79
\]

\[
158,042 / 56,568 = 2.79
\]

**3 – Step 10  Determine Work at Home Employment in the Designated Greenfield Area**

The minimum Designated Greenfield Area density established by the Growth Plan includes both residents and jobs. As a result, a projection as to the number of jobs associated with what are primarily residential areas needs to be calculated and incorporated into the demand for land in the Designated Greenfield Area. The employment related to such residential areas can be broken down into two forms, work at home employment, addressed through this step (see Input Glossary No. 10: Work at Home Factor) and population serving employment addressed through 3 – Step 11. The results of these two calculations are then incorporated into the calculation of the total residential Designated Greenfield Area demand not including undercount. For the purposes of the land budget exercise, work at home employment is calculated as a percentage of population within the Designated Greenfield Area.

**Calculation Methodology**

\[
\text{Work at Home Employment in the Designated Greenfield Area} = \text{population to be accommodated within the Designated Greenfield Area (from 3-S8)} \times \text{work at home participation rate} = 4,425
\]

\[
158,042 \times 0.028 = 4,425
\]

**Work at Home Employment in the Designated Greenfield Area = 4,425 jobs** (carried forward to 3-S12)
3 – Step 11 Determine the Population Serving Employment in the Designated Greenfield Area

The second form of employment occurring within the residential portion of the Designated Greenfield Area that needs to be considered as part of the land budget process is population serving employment. (see Input Glossary No. 11: Population Serving Employment Factor). The population serving employment is calculated as a factor of the number of regular dwelling units within the residential Designated Greenfield Area. The results of this calculation are then incorporated into the calculation of the total residential Designated Greenfield Area demand not including undercount.

Calculation Methodology

total new regular dwelling units in the Designated Greenfield Area (from 3-S7) / population serving jobs per regular dwelling unit factor within Residential Designated Greenfield Area = population serving employment within the Designated Greenfield Area

56,568 x 0.3 = 16,970

Population Serving Employment in the Designated Greenfield Area = 16,970 jobs (carried forward to 3-S12)

3 – Step 12 Determine Total Residential Designated Greenfield Area Demand Not Including Undercount

The Residential Designated Greenfield Area demand (not including the undercount) is determined by adding together the population to be housed in new regular dwellings within the Designated Greenfield Area, work at home in the Designated Greenfield Area and population serving employment in the Designated Greenfield Area with the percentage of new collective units that are anticipated to be built within the Designated Greenfield Area (see Input Glossary No. 5: Treatment of Collectives within the Demand Analysis for details).

Calculation Methodology

population to be accommodated within the Designated Greenfield Area (from 3-S8) + work at home employment in the Designated Greenfield Area (from 3-S10) + population serving employment in the Designated Greenfield Area (from 3-S11) + one third of the total collective population (portion of the new collective population to be accommodated in the Designated Greenfield Area) = total Residential Designated Greenfield Area demand

158,042 + 4,425 + 16,970 + 2,766 = 182,203

Total Residential Designated Greenfield Area Demand Not Including Undercount = 182,203 residents and jobs (carried forward to 3-S13)
3 – Step 13 Adjust for Designated Greenfield Area Portion of the Residential Undercount

The final step in calculating demand for residential Designated Greenfield Area is to adjust for the residential undercount arising from the Census and incorporated into the population projections contained within Schedule 3 of the Growth Plan. (see Input Glossary No. 12: Undercount)

**Calculation Methodology**

\[
\text{total residential Designated Greenfield Area demand not including undercount (from 3-S12) + Designated Greenfield Area portion of the residential undercount} = \text{total residential Designated Greenfield Area demand with Undercount}
\]

\[182,203 + 5,700 = 187,903\]

**Total Residential Designated Greenfield Area Demand with Undercount = 187,903 residents and jobs**
(carried forward to 5-S1)

3 – Step 14 Determine Total Employment Designated Greenfield Area Demand

The total demand for the Employment Designated Greenfield Area can be calculated by first taking the net employment increase within the planning period and multiplying it by the percentage of overall employment anticipated to occur within Industrial and Business Parks. The percentage of overall employment to occur within Industrial and Business Parks is then multiplied by the percentage of such employment anticipated to occur within the Employment Designated Greenfield Area (see Input Glossary No. 13: Industrial and Business Park Employment). In addition to Industrial and Business Parks, some employment in the Employment Designated Greenfield Area will occur on land designated for major retail uses. The anticipated employment within these areas is then added to the employment anticipated to occur within Industrial and Business Parks within the Employment Designated Greenfield Area to get the total Employment Designated Greenfield Area demand. (see Input Glossary No. 14: Major Retail Employment Component)

**Calculation Methodology**

\[(\text{total net increase in census based employment from 2006 (from 2006 Census) to 2031 (from Growth Plan Schedule 3) x percentage of employment located in business and industrial parks x percentage of business and industrial park employment to be accommodated within the Employment Designated Greenfield Area) + major retail area employment within Employment Designated Greenfield Area} = \text{total Employment Designated Greenfield Area demand}\]

\[(366,000 - 262,308) \times 0.4 \times 0.6 + 2,200 = 27,085\]

**Total Employment Designated Greenfield Area demand = 27,085 jobs**
(carried forward to 5-S2)
4.0 Capacity Analysis

The residential and employment capacity of the Designated Greenfield Area can be determined through a seventeen step process. The following steps are included in the capacity analysis process and are outlined in more detail later in this section:

Step 1 – Determine the Total Area of the Designated Greenfield Area
Step 2 – Calculate the Area of Provincially Constrained Environmental Areas
Step 3 – Calculate the Area of the Designated Greenfield Area (Net of Provincially Constrained Environmental Areas)
Step 4 – Determine the Area of Residential Designated Greenfield Area
Step 5 – Determine the Area of Components of the Residential Designated Greenfield Area
Step 6 – Determine Residential Designated Greenfield Area Densities by Category
Step 7 – Determine the Area of Employment Designated Greenfield Area
Step 8 – Determine Area of Components of the Employment Designated Greenfield Area by Category
Step 9 – Determine Employment Designated Greenfield Area Densities by Category
Step 10 – Determine the Allocation in Employment Demand by Category of Employment Land Use
Step 11 – Determine Employment Designated Greenfield Area Requirements if Built to Minimum Density within the Planning Horizon
Step 12 – Determine Density Compensation / Surplus in Employment Designated Greenfield Area from Growth Plan Density Target of 50 Residents and Jobs per Hectare only on Land Required if Built at Minimum Density within the Planning Horizon
Step 13 – Determine Density Compensation / Surplus in Total Township Urban Area Residential Designated Greenfield Area from the Growth Plan Density Target
Step 14 – Determine Density Compensation / Surplus in Urban Area Residential Designated Greenfield Area Subject to Plans of Subdivision before Growth Plan from the Growth Plan Density Target
Step 15 – Determine Urban Area Residential Designated Greenfield Area Density Target for Lands Not Subject to Plan of Subdivision before Growth Plan as Required to Meet Overall Growth Plan Designated Greenfield Area Density Target
Step 16 – Determine Capacity of Residential Designated Greenfield Area
Step 17 – Determine Capacity of Employment Designated Greenfield Area to Accommodate New Development

4 – Step 1 Determine the Total Area of the Designated Greenfield Area

For the purposes of this Revised Land Budget, the Designated Greenfield Area (see Appendix ‘A’) includes:

a) land as designated in the currently approved Regional Official Policies Plan (ROPP) and amendments thereto;

b) land currently designated for urban development in local official plans (and recognized as rural settlement or industrial/commercial areas in the ROPP) subsequently incorporated into the urban development designations in the new ROP;

c) expansions to the Urban Area originally proposed and justified through the processing of ROPP Amendment No. 28;

d) an expansion to the Highway 401/Regional Road 97 Employment Area justified for expansion through the 2006 Industrial Inventory and Justification Analysis as Prime Industrial/Strategic Reserve;
e) a fully developed parcel at the intersection of Plains Road and Huron Road; and

f) small portion of a parcel outside the boundary of the South Breslau Industrial/Commercial Area as designated in the Township of Woolwich Official Plan to recognize the existing use of the property as an auction centre.

The total area of the Designated Greenfield Area for the purposes of the analysis contained in this land budget is the area as contained in the adopted ROP as noted above = 6,980.2 ha (carried forward to 4-S3)

4 – Step 2 Calculate the Area of Provincially Constrained Environmental Areas

Provincially constrained environmental areas (save and except for the Habitat of Endangered and Threatened Species) are as shown on Appendix ‘A’. The total area of the provincially constrained environmental areas shown on Appendix ‘A’ is 1,332.1 ha. (carried forward to 4-S3)

The areas identified by MNR as Habitat of Endangered and Threatened Species are not included on Appendix ‘A’ in order to protect the species. The area of land identified as Habitat of Endangered and Threatened Species by MNR represents an additional 62.7 hectares of provincially constrained environmental area. (carried forward to 4-S3)

**Calculation Methodology**

area of provincially constrained environmental areas as mapped on Appendix ‘A’ + area of Habitat of Endangered and Threatened Species = area of provincially constrained environmental areas

1332.1 + 62.7 = 1394.8 hectares

The total area of Provincial Environmental Constraints = 1394.8 hectares (carried forward to 4-S3)

4 – Step 3 Calculate the Area of the Designated Greenfield Area (Net of Provincially Constrained Environmental Areas)

The area of the Designated Greenfield Area (net of provincially constrained environmental areas) can then be calculated by subtracting the provincially constrained environmental areas from the total Designated Greenfield Area.

**Calculation Methodology**

area of the Designated Greenfield Area (from 4-S1) – area of provincial constrained environmental areas (from 4-S2) = area of the Designated Greenfield Area (net of provincially constrained environmental areas)

6,980.2 – 1,394.8 = 5,585.5 hectares
The area of the Designated Greenfield Area (net of provincially constrained environmental areas) = 5,585.5 hectares (not used further in the analysis)

4 – Step 4  Determine the Area of Residential Designated Greenfield Area

The area of Residential Designated Greenfield Area was calculated by mapping the areas within the Designated Greenfield Area (net of provincially constrained environmental areas) intended through the local municipal designations or on-going planning processes to accommodate primarily residential uses. Smaller pockets of employment within larger areas of residential are considered residential for the purposes of this analysis and are accounted for as part of the population serving employment factor applied to such areas.

The area of the Residential Designated Greenfield Area = 3,567.8 hectares (not directly used further in the analysis as broken into TUA and UA in Step 5)

4 – Step 5  Determine the Area of Components of the Residential Designated Greenfield Area

The areas of the various components of the Residential Designated Greenfield Area required to facilitate the analysis were then determined with the areas being as follows:

Total TUA Residential = 606 ha (carried forward to 4-S13)

TUA Residential Designated Greenfield Area (Subject to a Plan of Subdivision before Growth Plan) = 162.2 ha

TUA Residential Designated Greenfield Area (Not Subject to a Plan of Subdivision before Growth Plan) = 443.8 ha (carried forward to 4-S13 and 4-S16)

Total UA Residential = 2,961.8 ha

UA Residential Designated Greenfield Area (Subject to a Plan of Subdivision before Growth Plan) = 1,109.5 ha (carried forward to 4-S14)

UA Residential Designated Greenfield Area (Not Subject to a Plan of Subdivision Before Growth Plan) = 1,852.3 ha (carried forward to 4-S15)
4 – Step 6  Determine Residential Designated Greenfield Area Densities by Category

The densities associated with the various categories of Residential Designated Greenfield Area (save and except for the portion of the Urban Area Residential Designated Greenfield Area not subject to a plan of subdivision prior to the coming into effect of the Growth Plan) are then calculated or projected. (see Input Glossary No. 15: Township Urban Area Density). The densities related to plans of subdivision were calculated taking into account the proposed unit mix, the PPUs for such units as used throughout this Revised Land Budget and a 4% undercount factor.

TUA Residential Designated Greenfield Area (Subject to a Plan of Subdivision before the Growth Plan including residential undercount assumption) = 47.37 residents and jobs per hectare (capacity of 7,685 residents and jobs) (carried forward to 4-S13 and 4-S16)

TUA Residential Designated Greenfield Area (Not Subject to a Plan of Subdivision before the Growth Plan) = minimum 45 residents and jobs per hectare target (carried forward to 4-S13 and 4-S16)

UA Residential Designated Greenfield Area (Subject to a Plan of Subdivision before the Growth Plan including residential undercount assumption) = 53.31 residents and jobs per hectare (capacity of 59,149 residents and jobs) (carried forward to 4-S14 and 4-S16)

UA Residential Designated Greenfield Area (Not Subject to a Plan of Subdivision before the Growth Plan) = to be determined through 4 - Step 15 below

4 – Step 7  Determine the Area of Employment Designated Greenfield Area

The area of Employment Designated Greenfield Area was calculated by mapping the areas within the Designated Greenfield Area (net of provincially constrained environmental areas) intended through the local municipal designations or on-going planning processes to accommodate exclusively employment uses. Smaller pockets of employment within larger areas of residential and areas of mixed use were considered Residential Designated Greenfield Area for the purposes of this analysis with the employment associated with such areas accounted for as part of the population serving employment factor applied to Residential Designated Greenfield Area.

The area of the Employment Designated Greenfield Area = 2,017.7 hectares

4 – Step 8  Determine Area of Components of the Employment Designated Greenfield Area by Category

The densities that can be expected within the Employment Designated Greenfield Area are not all the same. Areas with full municipal services typically attain significantly higher densities than areas with private servicing. In addition, the designation of lands as Prime Industrial/Strategic Reserve is intended to accommodate larger lot employment uses which typically have densities closer to that of privately serviced development than fully serviced ones. For the purposes of this analysis these areas were identified separately based on servicing, designations in local official plans or in the case of the Prime Industrial/Strategic Reserve, as designated in the ROP.
Total Fully Serviced Employment Designated Greenfield Area = 1,286.7 hectares  (carried forward to 4-S11 and 4-S17)

Total Privately Serviced Employment Designated Greenfield Area = 254.3 hectares  (carried forward to 4-S11)

Total Prime Industrial Strategic Reserve Designated Greenfield Area = 476.8 hectares  (carried forward to 4-S11)

4 – Step 9  Determine Employment Designated Greenfield Area Densities by Category

The following are the density targets projected on average over the various categories of Employment Designated Greenfield Area in the region. This does not mean that all land within any given category is expected to achieve the minimum density. It is anticipated that in the fully Serviced Employment Designated Greenfield Area that some lands may attain very high densities (>150 jobs per hectare), while others are expected to come in well below the average minimum.  (see Input Glossary No. 16: Employment Designated Greenfield Area Densities)

Fully Serviced Employment Designated Greenfield Area Density = average minimum of 40 jobs per hectare  (carried forward to 4-S11 and 4-S12)

Privately Serviced Employment Designated Greenfield Area Density = average minimum of 25 jobs per hectare  (carried forward to 4-S11 and 4-S12)

Prime Industrial Strategic Reserve Designated Greenfield Area Density = average minimum of 25 jobs per hectare  (carried forward to 4-S11 and 4-S12)

4 – Step 10  Determine the Allocation in Employment Demand by Category of Employment Land Use

The allocation of industrial and business park development is in part guided by the servicing available to such lands as well as the size of parcel being sought. The following is the allocation of the projected employment within the Designated Greenfield Area by category of Employment Designated Greenfield Area for use in the land budget analysis (see Glossary Input: Allocation of Employment Demand by Category of Employment Use for additional details)

Fully Serviced Employment = 75%  (carried forward to 4-S11)

Privately Serviced Employment = 10%  (carried forward to 4-S11)

Prime Industrial Strategic Reserve = 15%  (carried forward to 4-S11)
4 – Step 11  Determine Employment Designated Greenfield Area Requirements if Built to Minimum Density within the Planning Horizon

The Growth Plan requires that an average minimum density of 50 residents and jobs per hectare throughout the Designated Greenfield Area. Given the densities associated with various types of employment uses generally fall below this average target, it is important to consider how the density shortfall will be appropriately addressed. This becomes particularly important to consider when the total capacity of the employment areas exceeds that required within the planning horizon to accommodate forecasted employment. In such a situation, it is conceivable that 20 years worth of residential development could be compensating for density shortfalls associated with many more years of employment development. In order to equate the compensation requirements that will accrue to the Residential Designated Greenfield Area as a result of shortfalls in employment densities, it is necessary to project the amount of employment land that would be fully consumed if built out at anticipated ultimate densities. This permits the density compensation associated with these land to be properly calculated and applied to the Residential Designated Greenfield Area. It is understood that the remainder of the lands currently designated for employment uses will have to be appropriately compensated through future land budget processes involving expansions to permit additional residential development.

Fully Serviced Employment Designated Greenfield Area

**Calculation Methodology**

\[ \frac{((total \ employment \ Designated \ Greenfield \ Area \ demand - major \ retail \ area \ employment \ Designated \ Greenfield \ Area \ demand) \ (from \ 3-S14) \times percent \ of \ total \ employment \ Designated \ Greenfield \ Area \ demand \ forecast \ for \ fully \ serviced \ employment \ Designated \ Greenfield \ Area \ (from \ 4-S10) + major \ retail \ area \ employment \ Designated \ Greenfield \ Area \ demand \ (from \ 3-S14))}{fully \ serviced \ employment \ Designated \ Greenfield \ Area \ density \ (from \ 4-S9)} = \text{fully serviced employment Designated Greenfield Area land requirements if built at minimum density within the planning horizon} \]

\[ (((27,085 - 2,200) \times 0.75) + 2,200) / 40 = 521.59 \text{ hectares} \]

**Fully Serviced Employment Designated Greenfield Area Requirements if Built at Minimum Density within the Planning Horizon = 521.59 hectares** (carried forward to 4-S12)

Privately Serviced Employment Designated Greenfield Area

**Calculation Methodology**

\[ \frac{(total \ employment \ Designated \ Greenfield \ Area \ demand \ (from \ 3-S14) - major \ retail \ area \ employment \ Designated \ Greenfield \ Area \ demand \ (from \ 3-S14)) \times percent \ of \ total \ employment \ Designated \ Greenfield \ Area \ demand \ forecast \ for \ privately \ serviced \ employment \ Designated \ Greenfield \ Area \ (from \ 4-S10) + publicly \ serviced \ employment \ Designated \ Greenfield \ Area \ density \ (from \ 4-S9)}{privately \ serviced \ employment \ Designated \ Greenfield \ Area \ land \ requirements \ if \ built \ at \ minimum \ density \ within \ the \ planning \ horizon} = \text{privately serviced employment Designated Greenfield Area land requirements if built at minimum density within the planning horizon} \]

\[ (27,085 - 2,200) \times 0.1 / 25 = 99.54 \text{ ha} \]

**Privately Serviced Employment Designated Greenfield Area Land Requirements if Built at Minimum Density within the Planning Horizon = 99.54 ha** (carried forward to 4-S12)
Prime Industrial Strategic Reserve Employment Designated Greenfield Area

Calculation Methodology

\[(\text{total employment Designated Greenfield Area demand (from 3-S14)} - \text{major retail area employment Designated Greenfield Area demand (from 3-S14)}) \times \text{percent of total employment Designated Greenfield Area demand forecast for prime industrial strategic reserve employment Designated Greenfield Area (from 4-S10)} / \text{prime industrial/strategic reserve Designated Greenfield Area density (from 4-S9)} = \text{prime industrial strategic reserve Designated Greenfield Area land requirements if built at minimum density within the planning horizon}\]

\[(27,085 - 2,200) \times 0.15 / 25 = 149.31 \text{ ha}\]

**Prime Industrial Strategic Reserve Employment Designated Greenfield Area Land Requirements if Built at Minimum Density within the Planning Horizon = 149.31 hectares (carried forward to 4-S12)**

4 – Step 12 Determine Density Compensation / Surplus in Employment Designated Greenfield Area from Growth Plan Density Target of 50 Residents and Jobs per Hectare on Land Required if Built at Minimum Density within the Planning Horizon

This step in the calculation is to determine the appropriate compensation / surplus required based on the amount of employment capacity utilized within the planning period. The quantum of lands to which compensation needs to be applied is taken from 4 – Step 11.

Calculation Methodology

\[(\text{fully serviced employment Designated Greenfield Area required if built at minimum density with the planning horizon (from 4-S11)} \times (\text{Growth Plan density target – fully serviced employment Designated Greenfield Area target (from 4-S7)}) + (\text{privately serviced employment Designated Greenfield Area required if built at minimum density with the planning horizon (from 4-S11)} \times (\text{Growth Plan density target – privately serviced employment Designated Greenfield Area target (from 4-S7)}) + (\text{prime industrial strategic reserve employment Designated Greenfield Area ha required if built at minimum density with the planning horizon (from 4-S11)} \times (\text{Growth Plan density target – prime industrial strategic reserve employment Designated Greenfield Area target (from 4-S7)}) = \text{density compensation associated with employment Designated Greenfield Area targets only on land required if built at minimum density within the planning horizon}\]

\[(521.59 \times (50 - 40)) + (99.54 \times (50 - 25)) + (149.31 \times (50 - 25)) = 11,435\]

**Density Compensation Associated with Employment Designated Greenfield Area Targets Only on Land Required if Built at Minimum Density within the Planning Horizon = 11,435 residents and jobs (carried forward to 4-S15)**

4 – Step 13 Determine Density Compensation / Surplus in Total Township Urban Area Residential Designated Greenfield Area from the Growth Plan Density Target

This step in the calculation determines the amount of compensation/surplus resulting from densities associated with the Township Urban Area.
Calculation Methodology

(TUA residential Designated Greenfield Area hectares (from 4-S5) x Growth Plan density target) - ((TUA residential Designated Greenfield Area not subject to plan of subdivision before Growth Plan hectares (from 4-S5) x TUA density target from 4-S6) + capacity in TUA residential Designated Greenfield Area subject to plan of subdivision before Growth Plan including residential undercount assumption) from 4-S6 = density compensation / surplus in TUA residential Designated Greenfield Area from the Growth Plan density target

(606 x 50) – ((443.8 x 45) + 7,685) = 2,644 residents and jobs required density compensation

Density Compensation Associated with TUA Residential Designated Greenfield Area = 2,644 residents and jobs (carried forward to 4-S15)

4 – Step 14 Determine Density Compensation / Surplus in Urban Area Residential Designated Greenfield Area Subject to Plans of Subdivision before Growth Plan from the Growth Plan Density Target

This step in the calculation determines the amount of compensation/surplus resulting from densities associated with the Urban Area Residential Designated Greenfield Area that is the subject of a plan of subdivision submitted prior to the coming into force of the Growth Plan.

Calculation Methodology

(UA residential Designated Greenfield Area capacity subject to plans of subdivision before the Growth Plan including residential undercount assumption (from 4-S6)) – (UA residential Designated Greenfield Area hectares subject to plans of subdivision before the Growth Plan (from 4-S6) x Growth Plan density target) = density compensation / surplus in UA residential Designated Greenfield Area subject to plans of subdivision before the Growth Plan from the Growth Plan density target

59,149 – (1109.5 x 50) = 3,674 residents and jobs surplus

Surplus in Density Associated with UA Residential Designated Greenfield Area Subject to Plans of Subdivision before the Growth Plan = 3,674 residents and jobs (carried forward to 4-S15)

4 – Step 15 Determine Urban Area Residential Designated Greenfield Area Density Target for Lands Not Subject to Plan of Subdivision before Growth Plan as Required to Meet Overall Growth Plan Designated Greenfield Area Density Target

This step in the calculation determines the density required within the remaining Urban Area Residential Designated Greenfield Area that is not the subject of a plan of subdivision submitted prior to the coming into force of the Growth Plan, given the results of the compensation/surplus analysis of the other components of the Designated Greenfield Area.
Calculation Methodology

((UA residential Designated Greenfield Area not subject to plans of subdivision before Growth Plan hectares (from 4-S5) x Growth Plan density target) + density compensation associated with employment Designated Greenfield Area targets (from 4-S12) + density compensation associated with TUA residential Designated Greenfield Area (from 4-S13) - surplus in density associated with UA residential Designated Greenfield Area subject to plans of subdivision before Growth Plan) (from 4-S14) / UA residential Designated Greenfield Area (not subject to plan of subdivision before Growth Plan (from 4-S6)) = UA residential Designated Greenfield Area density target for lands not subject to plan of subdivision before Growth Plan as required to meet overall Growth Plan Designated Greenfield Area density target

((1,852.3 x 50) + 11,435 + 2,644 – 3,674) / 1,852.3 ha = 55.62 residents and jobs per ha

Urban Area Residential Designated Greenfield Area Density Target for Lands Not Subject to Plan of Subdivision before Growth Plan as Required to Meet Overall Growth Plan Designated Greenfield Area Density Target = 55.62 residents and jobs per hectare (carried forward to 4-S16 as 55)

4 – Step 16 Determine Capacity of Residential Designated Greenfield Area

The total capacity of the Residential Designated Greenfield Area to accommodate new development can be calculated by multiplying the number of hectares in each of the categories of Residential Designated Greenfield Area by the average minimum density applicable to such areas and then subtracting the amount of existing development in the Employment Designated Greenfield Area (see Input Glossary No. 17: Existing Development). Where lands are subject to a plan of subdivision submitted prior to the coming into force of the Growth Plan, the densities associated with these plans is used in the calculation instead of a land area / density based calculation.

Calculation Methodology

(TUA residential Designated Greenfield Area capacity subject to plans of subdivision before the Growth Plan including residential undercount assumption (from 4-S6)) + (TUA Residential Designated Greenfield Area ha not subject to plan of subdivision before Growth Plan (from 4-S5)) x TUA minimum density (from 4-S6)) + (UA residential Designated Greenfield Area capacity of subdivision before the Growth Plan including residential undercount assumption (from 4-S6)) + (UA Residential Designated Greenfield Area not subject to plan of subdivision before Growth Plan (from 4-S5) x UA minimum density (from 4-S15)) – existing development within residential Designated Greenfield Area = Residential Designated Greenfield Area Capacity

7,685 + (443.8 x 45) + 59,149 + (1852.3 x 55) – 5,278 = 183,403 residents and jobs

Capacity of Residential Designated Greenfield Area = 183,403 residents and jobs (carried forward to 5-S1)

4 – Step 17 Determine Capacity of Employment Designated Greenfield Area to Accommodate New Development

The total capacity of the Employment Designated Greenfield Area to accommodate new development can be calculated by multiplying the number of hectares in each of the categories of Employment Designated Greenfield Area by the average minimum density applicable to such uses and then subtracting the amount of
existing development in the Employment Designated Greenfield Area. (see Input Glossary No. 17: Existing Development)

**Calculation Methodology**

\[
(\text{area of Serviced Employment Designated Greenfield Area} \ (\text{from 4-S8})) \times \text{Serviced Employment Designated Greenfield Area average minimum density} \ (\text{from 4-S7}) + (\text{area of Unserved Employment Designated Greenfield Area} \ (\text{from 4-S8})) \times \text{Unserved Employment Designated Greenfield Area average minimum density} \ (\text{from 4-S7}) + (\text{area of Prime Industrial Strategic Reserve Employment Designated Greenfield Area} \ (\text{from 4-S8})) \times \text{Prime Industrial Strategic Reserve Employment Designated Greenfield Area average minimum density} \ (\text{from 4-S7}) - \text{existing development within the Employment Designated Greenfield Area} = \text{Employment Designated Greenfield Area capacity to accommodate new development}
\]

\[
(1,286.7 \times 40) + (254.3 \times 25) + (476.8 \times 25) - 218 = 69,527 \text{ jobs}
\]

**Capacity of Employment Designated Greenfield Area to accommodate new development = 69,527 jobs**

(carried forward to 5-S2)

5.0 **Capacity versus Demand Analysis**

The residential and employment capacity versus demand analysis is used to determine if additional lands are required within the urban settlement areas of the Region or if a surplus amount of land exists. This analysis is done through a two step process. The following steps are included in the capacity versus demand analysis process and are outlined in more detail later in this section:

Step 1 – Determine Required Land / (Surplus) in the Residential DGA
Step 2 – Determine Required Land / (Surplus) in the Employment DGA

5 – Step 1 **Determine Required Land / (Surplus) in the Residential Designated Greenfield Area**

This calculation determines if there is a shortfall or surplus of land in the Residential Designated Greenfield Area to accommodate the demand calculated through their analysis (based on Schedule 3 of the Growth Plan to 2031).

**Calculation Methodology**

\[
(\text{total capacity in residential Designated Greenfield Area} \ (\text{from 4-S16})) - (\text{total demand in the residential Designated Greenfield Area} \ (\text{from 3-S13})) = \text{required / surplus in the residential Designated Greenfield Area}
\]

\[
(183,403 - 187,903) = \text{shortfall of 4,500 residents and jobs}
\]

Shortfall in the Residential Designated Greenfield Area = 4,500 residents and jobs
5 – Step 2  Determine Required Land / (Surplus) in the Employment Designated Greenfield Area

This calculation determines if there is a shortfall or surplus of land in the Residential Designated Greenfield Area to accommodate the demand calculated through their analysis (based on Schedule 3 of the Growth Plan to 2031.

**Calculation Methodology**

\[
\text{(total capacity in Designated Greenfield Area (from 4-S17))} - \text{(total maximum demand in the Designated Greenfield Area (from 3-S14))} = \text{required / surplus land in the employment Designated Greenfield Area}
\]

\[(69,527 - 27,085) = \text{surplus of 42,442 jobs}\]

Surplus in the Employment Designated Greenfield Area = 42,442 jobs

6.0  Analysis / Conclusions

6.1  Analysis

Since the original endorsement of the Land Budget, a significant amount of development activity has occurred that gives valuable insight into the outcome future implementation of the ROP will have on urban areas within the Region. The following is a brief comparison of the intensification and DGA density targets as adopted within the ROP and the corresponding experiences to date.

**45 Percent Intensification Target**

PROPOSED POLICY: ROP Policy 2.C.2 requires that by the year 2015 and every year thereafter that a minimum of 45 percent for all new residential development within the Region will occur within the built-up area.

EXPERIENCE TO DATE: For the first five and a half years of the planning period running from July 1, 2006 through December 31, 2011, 46.35 percent of all residential development building permits issued within the Region of Waterloo were for dwelling units within the built-up area.

**Urban Area Designated Greenfield Density of 55 (residents and jobs per hectare)**

PROPOSED POLICY: ROP Policy 2.D.17 requires that areas serving primarily a residential function within Urban Areas (residential DGA) will meet or exceed a minimum density of 55 residents and jobs combined per hectare on lands not subject to a plan of subdivision when the Growth Plan came into effect.

EXPERIENCES TO DATE: Although not impacted by ROP Policy 2.D.17, plans of subdivision submitted before the Growth Plan came into effect represent 37.11% of all Urban Area DGA unconstrained by provincial environmental constraints and have risen from 47.53 residents and jobs combined per hectare (49.21 residents and jobs combined per hectare adjusted for undercount) on June 16, 2006, to 51.49 residents and jobs combined per hectare (53.31 residents and jobs combined per hectare adjusted for undercount).
Development applications submitted since the Growth Plan came into effect (including plans of subdivision to year end 2010 and the Rosenberg Secondary Plan) represent 30.54% of all Urban Area DGA unconstrained by provincial environmental constraints and have a combined density of 62.01 residents and jobs combined per hectare (64.17 residents and jobs combined per hectare adjusted for undercount).

Township Urban Area Density of 45 (residents and jobs per hectare)

PROPOSED POLICY: ROP Policy 2.E.6 requires that areas serving primarily a residential function within Township Urban Areas (residential DGA) will meet or exceed a minimum density of 45 residents and jobs combined per hectare on lands not subject to a plan of subdivision when the Growth Plan came into effect.

EXPERIENCES TO DATE: Although not impacted by ROP Policy 2.E.6, plans of subdivision submitted before the Growth Plan came into effect represent 26.76% of all Township Urban Area DGA unconstrained by provincial environmental constraints and have risen from 41.45 residents and jobs combined per hectare (42.91 residents and jobs combined per hectare adjusted for undercount) on June 16, 2006, to 45.75 residents and jobs combined per hectare (47.37 residents and jobs combined per hectare adjusted for undercount).

Plans of subdivision submitted since the Growth Plan came into effect represent 17.11% of all Township Urban Area DGA unconstrained by provincial environmental constraints and have a density of 49.75 residents and jobs combined per hectare (51.51 residents and jobs combined per hectare adjusted for undercount).

6.2 Conclusions

1) There is a shortfall in capacity in the Residential Designated Greenfield Area of approximately 4,500 residents and jobs to accommodate forecasted population growth to the year 2031. This equates to the potential need for additional land of between 80 and 100 hectares depending if the associated expansion(s) is proposed to the Urban Area or the Township Urban Area.

2) Sufficient capacity exists within the overall non-residential Designated Greenfield Area as provided for in the ROP to accommodate forecasted employment to the year 2031.

3) Notwithstanding 2) above, consideration should to be given to the designation of additional non-residential lands within the Township of Wellesley as required to accommodate forecasted employment growth within the Township.

4) The targets proposed by the ROP generally match the current trends in the market place, with the intensification target and DGA density targets generally being met or exceeded since the coming into force of the Growth Plan.

5) The minimum intensification and DGA density targets contained in the ROP as adopted by Regional Council remain appropriate and should be approved by the Ontario Municipal Board.

6) The Regional Land Budget should be updated every five years as part of the mandated five year review of the ROP to see if additional land is required to accommodate forecasted population or employment growth.
Appendix C: Input Glossary

1. **Census Based Forecast for Use in Household Forecast and Associated PPUs** (referenced in 3-S1) – The undercount has been removed from both the base year (2006) and horizon year (2031) forecasts leaving a census based forecast for the purposes of the demand analysis relating to housing forecasts and associated PPUs. However, the portion of the undercount related to the Designated Greenfield Area has been added back into the Designated Greenfield Area demand calculation in Step 13 to ensure the demand analysis related to the Designated Greenfield Area reflects the entirety of the 729,000 population forecast in Schedule 3 of the Growth Plan. The proportion of the undercount assigned to the Designated Greenfield Area reflects the proportion of undercount eligible residential development occurring there.

2. **Population Decline in Existing Dwellings** (referenced in 3-S1) – For the purposes of the Revised Land Budget, it is forecasted that the number of people in the existing housing stock will decline by 20,000 to year end 2031. This represents a decline in the average PPU for existing dwellings to approximately 2.53 from the current 2.64, and is consistent with the leveling off of the decline in PPUs that has occurred over the past several decades.

3. **Demolitions** (referenced in 3-S1) – One of the changes from the previous land budget is the inclusion of an allowance for demolitions within the existing housing stock that recognize both demolitions that make way for intensification and demolitions which are simply a demolish and replace, typically of older single detached houses. For the purposes of the calculation, a forecast of 2,000 demolitions has been used. This number is roughly based on the rate of demolitions over the past five years. With the demolition of these dwellings comes a need to house the existing residents in new housing. As it is unclear how many of these units may have been vacant during the past census or the mix of units that may end up being demolished, the Revised Land Budget utilizes the average Regional PPU from the 2006 census of 2.64 for estimating the number of additional people to be housed in new dwellings (2,000 units x 2.64 PPU = 5,280). This number is over and above the 20,000 decline in the existing housing stock resulting from declining PPUs.

4. **Revised Student Forecast** (referenced in 3-S1) – A revised student forecast (non-census based students requiring regular dwellings) has been developed in consultation with the University of Waterloo, Wilfrid Laurier University and Conestoga College. The Revised Land Budget provides for 9,100 additional non-census based students requiring housing in regular dwellings for the period from 2006 to 2031 (up from 2,700 for the period of 2006 – 2029 in the original Land Budget). This translates into a projected 2,500 units (all projected to be within the built-up area) based on a projected student PPU of approximately 3.95. This PPU projection anticipates an average PPU of approximately 4.0 for those students attending University of Waterloo and Wifrid Laurier University and 3.0 for those attending Conestoga College. This is considered a conservative PPU value given recent trends in student apartment construction. Within the area bounded by Phillip Street, University Avenue, Regina Street and Columbia Street, 606 apartment units were built in the years 2009 through 2011. These apartment units averaged 4.59 bedrooms per unit.

5. **Treatment of Collectives Within the Demand Analysis** (referenced in 3-S1 and 3-S12) – The Revised Land Budget projects a net increase of 8,300 in the number of residents to be housed in
collectives by 2031. This forecast is based on the review of the age profile and the increasing need for such housing within the baby boom population. The net increase in population to be housed in collectives has been removed from the demand analysis relating to housing forecasts and associated PPUUs. However, the portion of the collective population that is anticipated to reside in the Designated Greenfield Area (one third of all collective residents) has been added back into the Designated Greenfield Area demand calculation in 3-S12. The ratio of 2:1 split for collectives between the built-up area and the Designated Greenfield Area reflects both recent trends and the anticipated impact of the planned rapid transit system on the future location of such facilities.

6. **Net Increase of 98,350 households from 2006 to 2031** (referenced in 3-S2) – The Revised Land Budget projects a net increase creation of 98,350 households within the planning period (2006 to 2031). This forecast has been derived by Watson & Associates Economists Limited using a headship rate analysis.

7. **45% Intensification Rate Throughout the Planning Period** (referenced in 3-S4) – From July 1, 2006 to year end 2011 46.35% of all residential building permits issued within the Region of Waterloo were for dwelling units within the built-up area. There is no indication that this average rate of intensification is anticipated to decline over the next several years with the minimum intensification rate of 45% mandated by ROP Policy 2.C.2 taking effect in 2015. As a result, the Revised Land Budget utilizes a 45% intensification average throughout the planning period in the demand analysis.

8. **2.05 PPU for Intensification Units** (referenced in 3-S5) – The Revised Land Budget uses an average PPU for intensification units of 2.05. This PPU value reflects a number of factors including:

   a) the presence of vacant lots and blocks providing for 2,145 single and semi detached (forecasted PPU of 3.25) and 1,580 townhouse units (forecasted PPU of 2.44) within the built-up area as of June 16, 2006 when the built boundary was established by the Province;
   b) 2,500 student related dwelling units (forecasted PPU of 3.95) forecasted to be constructed within the built-up area; and
   c) anticipated demolition and replacement of approximately 250 older single detached units with newer units (forecasted 3.25 PPU).

In addition to the above noted units, there are a number of significant opportunities for the inclusion of townhouse units within both major and minor intensification projects. A PPU value of 2.05 would reflect the construction of approximately 5,000 townhouse units (in addition to the 1,580 noted above) in the built-up area throughout the planning period.

**EXAMPLE:** \((2,145 \times 3.25) + (1,580 \times 2.44) + (2,500 \times 3.95) + (250 \times 3.25) + (5,000 \times 2.44) + (34,200 \times 1.77) / 45,675 \) projected dwelling units in the built-up area = 2.06 PPU

**NOTE:** Regional staff has further reviewed the issue of demolitions since the preparation of the version of the Revised Land Budget prepared in March 2012. Based on this review it would appear that the potential for a significantly higher number of demolition and replacement of single detached units exists than provided for above (it is our current estimation that somewhere closer to 700 demolish and replace demolitions is likely to occur within the planning horizon). With the increased costs associated with suburban land and the existence of a considerable inventory of aging homes owned by seniors, the
existing housing stock has been identified by some builders as representing significant opportunities for the development of updated single detached dwelling units.

9. **2.79 Average PPU for Designated Greenfield Area Residential Dwelling Units** (referenced in 3-S9) – This average PPU for residential dwelling units in the Designated Greenfield Area could reflect a number of combinations of different types of dwelling units which can be calculated by applying percentages of dwelling units by the projected PPU values for such units.

   EXAMPLE representing a mix containing 60% single detached dwellings, 20% townhouses and 20% apartments: \( (0.6 \times 3.25) + (0.2 \times 2.44) + (0.2 \times 1.77) = 2.792 \) Average PPU

   This contrasts favorably with the current Regional plan of subdivision Designated Greenfield Area inventory (24,514 dwelling units) which contains 59.79% single detached dwellings, 22.70% townhouses and 17.50% apartments.

10. **Work at Home Factor** (referenced in 3-S10) - Work-at-home for the Designated Greenfield Area has been projected based on the results of the 2006 Census net of agricultural related work at home employment and represents a factor of 2.8% of the overall population.

11. **Population Serving Employment Factor** (referenced in 3-S11) - Population serving employment has been calculated based on a review of the employment occurring within existing primarily residential neighbourhoods within Waterloo Region using Census data. The factor used in the calculation is one job for every 10 residential dwelling units.

12. **Undercount Calculation** (referenced in 3-S13) – As part of the Census process, Statistics Canada estimates the undercount (people who should have been part of the Census but failed for some reason to be reported). A 4% undercount factor undercount was included within the population projections contained in Schedule 3 of the Growth Plan and as such has been used throughout the analysis contained herein as applicable.

13. **Industrial and Business Park Employment** (referenced in 3-S14) - The current share of all regional employment accommodated within industrial and business parks is approximately 40%. For the purposes of this analysis it will be assumed that while there will be changes in the form, density and mix of uses associated with businesses within industrial and business parks, the overall percentage of employment that locates within these areas will remain at 40%. It should be noted that Growth Plan strongly promotes an urban form that would result in a significant number of office jobs within the Urban Growth Centres and Major Transit Station Areas to support and be supported by the development of a rapid transit system. With full implementation of these policies over time, it can be expected that there will be some decline in the office component of what has more recently become considered as typical industrial and business park uses. As a result, the forecasted 40% of overall employment anticipated to occur within the industrial and business parks could be expected to decline in the future, but will be used within this Regional Land Budget as a conservative estimate.
The 2006 Industrial and Business Park Vacant Land Inventory and Demand Analysis as noted below also addressed the absorption of some of the new industrial and business park job growth through intensification.

One of the important factors that have to be taken into consideration in determining how this employment will be accommodated relates to the intensification that can reasonably be expected to occur through additions to existing buildings. Over the ten years between 1995 and 2004, additions have averaged approximately 40% of total growth in industrial floor space and given the low to moderate densities existing on industrial and business park lands, it is not unreasonable to assume this trend will continue for the foreseeable future. Over this same ten year period, the square footage cost of additions has been approximately 8 percent higher than the square footage cost of new development. While the cost of additions traditionally exceeds the cost of new development, the relative value of the construction suggests that the intensification being experienced is relatively complex in form (i.e. not simply storage or warehousing space), and will continue to represent a significant factor in accommodating new employment through intensification.

At the time (2006), the 3,433 hectares of built industrial and business park lands within the Cities of Cambridge, Kitchener and Waterloo were found to have employment densities of approximately 27.6 jobs per hectare, providing considerable opportunity for intensification. In addition, as of year end 2006, there was 305 net hectares of fully serviced vacant industrial and business park lands located within the built boundary. While these lands are not subject to the Growth Plan density targets, it is still reasonable to assume that vacant industrial and business parks located within the built boundary will continue to absorb a reasonable level of employment over the 2029 planning horizon. For the purposes of this analysis, it is assumed that 40% of all of the anticipated industrial and business park employment will occur within the built boundary. While this is not a requirement of the Growth Plan, it is a reasonable assumption based upon the factors noted above.

14. **Major Retail Employment Component** (referenced in 3-S14) - A forecast of potential major retail area employment within the Designated Greenfield Area has been provided to reflect the approval of approximately 1.2 million square feet for such development within the Boardwalk and Mercedes sites in the Cities of Kitchener/Waterloo and Township of Woolwich respectively. A factor of 550 square feet per employee has been used to generate an employment forecast for major retail in the Designated Greenfield Area of 2,200.

15. **Township Urban Area Density** (referenced in 4-S6) – The minimum density for the Township Urban Area Designated Greenfield Area not under plan of subdivision at the time of the coming into force of the Growth Plan has been determined based on the anticipated densities for such land within the smaller fully serviced communities. Consideration was also given at the time of setting of the densities to the unavailability of transit service within these communities.

16. **Employment Designated Greenfield Area Densities** (referenced in 4-S9) – Densities relating to the various uses of employment lands in the Designated Greenfield Area are provided in Step 5. These minimum density targets have been assigned based on the nature of the uses expected to locate within
such areas, the expectations for build out of such areas as expressed in the local municipal zoning by-laws. This process was also informed by the results of the 2006 Industrial and Vacant Land Inventory and Demand Analysis.

17. **Existing Development** (referenced in 4-16 and 4-S17) – Existing development within the Designated Greenfield Area was established based on a review of existing dwellings and businesses as of June 16, 2006. In total, there were 5,496 residents and jobs within the existing Designated Greenfield Area, with 5,278 being within the Residential portion of the Designated Greenfield Area and 218 being within the Employment Designated Greenfield Area.

18. **PPU Values for New Development** (used throughout) – The PPU values for new development (single/semi = 3.25, townhouses = 2.44 and apartments = 1.77) have been adjusted slightly downward from those used in the original Land Budget to reflect the continuing trend to lower PPUs.
Appendix D: April 2009 / March 2012 - Land Budget Comparison

The Ontario Municipal Board recently ruled that conformity with the Growth Plan requires utilization of both a planning horizon year of 2031 and the precise growth forecasts contained within Schedule 3 of the Growth Plan.

This update to the Land Budget has been prepared to comply with the decision of the Board, resolve issues raised during the review of the Land Budget since its adoption by Regional Council and to update the analysis to represent the most up to date statistics available. The following changes have been included in this update:

a) The analysis contained within the Revised Land Budget is based on a planning period from mid year 2006 to mid year 2031 so as to specifically align with the base year 2006 census and the 2031 forecast contained in Schedule 3 of the Growth Plan. The population, housing and employment forecasts have been adjusted within the Revised Land Budget accordingly.

b) The forecast used within the Revised Land Budget is that contained within Schedule 3 of the Growth Plan. The initial calculation methodology for determining the number of new households, and various PPU values utilizes straight census based forecast (excluding the undercount) for population. The DGA related residential undercount has been added back into the calculation at the end to provide a demand analysis fully reflective of the 2031 population forecast contained in the Growth Plan. The required residential undercount has also been factored into the capacity of plans of subdivision submitted prior to the coming into force of the Growth Plan.

c) The forecasted number of non-census based students within the planning horizon has been adjusted within the Revised Land Budget based on direct consultation with staff of University of Waterloo, Wilfrid Laurier University and Conestoga College responsible for long range planning and analysis. The housing forecast includes additional units as required to house the forecasted non-census based students requiring regular dwellings with the associated PPU values for this housing based on recent trends for student related housing.

d) The forecast and treatment of collectives within the Revised Land Budget has been adjusted and clarified as required to reflect recent trends.

e) The Revised Land Budget includes an allowance within the housing forecast to account for demolitions within the existing housing stock associated with reurbanization and replacement of existing housing units.

f) The phase-in of the 45% intensification target adopted by Regional Council has been adjusted within the Revised Land Budget to reflect actual intensification experienced to year end 2011.

g) The area of the DGA within the Revised Land Budget has been revised to reflect:

i) consistent use of the centre line of the road as the external boundary for urban settlement areas as provided for in the policies of the ROP as adopted by Regional Council;

ii) up-to-date data relating to the Significant Habitat of Endangered and Threatened Species; and

iii) additional area of PSWs identified by MNR since the development of mapping in the ROP.
h) Revise the assignment of DGA as either residential or non-residential within the Revised Land Budget to reflect changes in land use designations within area municipal official plans since the preparation of the original Land Budget.

i) The PPU for new development have been reduced to reflect a projected continued decline of the PPU for such units throughout the planning period.

j) The data within the Revised Land Budget related to the pre-June 16, 2006 plans of subdivision located in the DGA has been adjusted to reflect the status of those subdivisions to year end 2011.

k) An additional allowance for major retail area employment within the DGA has been provided within the Revised Land Budget to reflect the approval of such development at the Boardwalk and Mercedes sites in the Cities of Kitchener/Waterloo and Township of Woolwich respectively.

No changes have been made within or are proposed by the Revised Land Budget to any of the density or intensification targets contained within the ROP policies as adopted by Regional Council.
Attachment B

Comparison of the April 2009 Land Budget with the Revised Land Budget

As a result of the OMB decision relating to the planning horizon and in preparation for the land budget phase of the hearing, Regional staff has had to revise the Land Budget originally endorsed by Regional Council in April 2009. This update to the Regional Land Budget, now referred to as the Revised Land Budget has been prepared to comply with the decision of the Board, address issues raised during the review of the Land Budget since its adoption by Regional Council, and update the analysis to include the most up to date statistics available. The following changes have been included in this update:

a) The analysis contained within the Revised Land Budget is based on a planning period from mid year 2006 to mid year 2031 so as to specifically align with the base year 2006 census and the 2031 forecast contained in Schedule 3 of the Growth Plan. The population, housing and employment forecasts have been adjusted within the Revised Land Budget accordingly.

b) The forecast used within the Revised Land Budget is that contained within Schedule 3 of the Growth Plan as per the direction of the Board. The initial calculation methodology for determining the number of new households, and various PPU values utilizes straight census based forecast (excluding the undercount) for population. The Designated Greenfield Area related residential undercount has been added back into the calculation at the end to provide a demand analysis fully reflective of the 2031 population forecast contained in the Growth Plan. The required residential undercount has also been factored into the capacity of plans of subdivision submitted prior to the coming into force of the Growth Plan.

c) The forecasted number of non-census based students within the planning horizon has been adjusted within the Revised Land Budget based on direct consultation with staff of University of Waterloo, Wilfrid Laurier University and Conestoga College responsible for long range planning and analysis. The housing forecast includes additional units as required to house the forecasted non-census based students requiring regular dwellings (9,100, up from 2,700 in the original Land Budget) with the associated PPU values for this housing based on recent trends for student related housing.

d) The forecast and treatment of collectives within the Revised Land Budget has been adjusted and clarified as required to reflect recent trends.

e) The Revised Land Budget includes an allowance within the housing forecast to account for demolitions within the existing housing stock associated with reurbanization and replacement of existing housing units.

f) The phase-in of the 45% intensification target adopted by Regional Council has been adjusted within the Revised Land Budget to reflect actual intensification experienced to year end 2011.

g) The area of the Designated Greenfield Area within the Revised Land Budget has been revised to reflect:

   i) consistent use of the centre line of the road as the external boundary for urban settlement areas as provided for in the policies of the ROP as adopted by Regional Council;
ii) up-to-date data relating to the Significant Habitat of Endangered and Threatened Species; and

iii) additional area of PSWs identified by MNR since the development of mapping in the ROP.

h) The assignment of Designated Greenfield Area as either residential or non-residential has been adjusted within the Revised Land Budget to reflect changes in land use designations within area municipal official plans since the preparation of the original Land Budget.

i) The PPUs for new development have been reduced slightly to reflect a projected continued decline of the PPU for such units throughout the planning period.

j) The data within the Revised Land Budget related to the pre-June 16, 2006 plans of subdivision located in the Designated Greenfield Area has been adjusted to reflect the status of those subdivisions to year end 2011.

k) An additional allowance for major retail area employment within the Designated Greenfield Area has been provided within the Revised Land Budget to reflect the approval of such development at the Boardwalk and Mercedes sites in the Cities of Kitchener/Waterloo and Township of Woolwich respectively.

l) It has been determined that, based on simple achievement of the minimum intensification targets contained in the ROP and the minimum Designated Greenfield Area density targets established within the Growth Plan, an expansion to the urban areas of the ROP to accommodate 4,500 residents and jobs (between 80 and 100 hectares) may be justifiable to accommodate residential forecasted growth within the 2031 planning period.
Attachment C

Waterloo Region Land Budget

Independent Real Estate Intelligence

April 23, 2012
Waterloo Region Land Budget

Prepared for:

Activa Group

Prepared by:

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economics@altusgroup.com
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April 23, 2012
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1 INTRODUCTION

1.1 PURPOSE

The purpose of this report is to assess the long-term land needs for the Region of Waterloo in the context of the forecasts, targets and policies in Places to Grow. Growth Plan for the Greater Golden Horseshoe.

Settlement area boundary expansions may only occur as part of a municipal comprehensive review where it has been demonstrated that sufficient opportunities to accommodate forecasted employment and population growth through intensification and in designated greenfield areas (using the intensification target and density targets) are not available within the regional market area. A municipal comprehensive review must comprehensively apply the policies of the Growth Plan.

The Growth Plan’s long-term vision for the Greater Golden Horseshoe provides for a wide variety of choices for living and a choice of suitable sites for employment uses. The Growth Plan also indicates that the Provincial Policy Statement continues to apply. The Provincial Policy Statement requires municipalities to provide for an appropriate range of housing types and densities to meet projected requirements of current and future residents, and to maintain a range and choice of suitable sites for a wide range of economic activities.

This land budget draws conclusions at a Region-wide scale and does not include the allocation of growth forecasts, intensification targets, designated greenfield density targets, settlement area boundary expansions or housing requirements to the lower-tier municipalities.

1.2 POPULATION AND EMPLOYMENT FORECASTS

The 2031 population and employment forecasts in Schedule 3 of the Growth Plan are used for this land budget analysis. The population forecasts in Schedule 3 are based on the population resident in the Region, including the adjustment for Census undercount and institutional population. The Schedule 3 population estimates for 2001 and the forecasts exclude temporary residents whose usual place of residence is located elsewhere (e.g. students who are not permanent residents of the Region, cottagers, temporary workers, etc.).
The Schedule 3 employment estimates and forecasts are based on Census estimates which include the full range of paid employment including full-time, part-time, and seasonal jobs, as well as persons working at home and employed persons with no fixed place of work. Part-time and seasonal jobs are not discounted relative to full-time permanent employment.1

Schedule 3 indicates that the source of the forecasts is Hemson Consulting Ltd., *The Growth Outlook for the Greater Golden Horseshoe*, January 2005.

---

1 According to the 2006 Census Dictionary: “The “Employed” includes all persons who ‘worked for pay or in self-employment’ in the week prior to enumeration. This includes all persons working for wages or salaries, all self-employed persons (with or without paid help) working in their own business, farm or professional practice during the reference week. The ‘Employed’ also includes persons who were absent from their job or business for a variety of reasons.”
2 ADEQUACY OF RESIDENTIAL LAND SUPPLY

In this chapter, opportunities to accommodate forecasted population and population-related employment through intensification and in designated greenfield areas are examined.

2.1 PROJECTED POPULATION AND EMPLOYMENT GROWTH

According to Schedule 3 of the Growth Plan, the population of the Region of Waterloo is forecast to increase from 456,000 persons in 2001 to 729,000 persons in 2031. Most post-secondary students living temporarily in Waterloo Region are not included in the Waterloo forecast, as they are included in the population estimates of their usual places of residence (their hometowns).

Total employment in the Region of Waterloo is forecast to increase from 236,000 jobs in 2001 to 366,000 jobs in 2031. Approximately 60% of projected employment growth in Waterloo Region is expected to be accommodated in residential and mixed-use areas of the Region. This growth in population-related employment will be accommodated through a combination of intensification and in designated greenfield areas.

2.2 FORECAST OF HOUSING REQUIREMENTS

From a practical perspective, the population forecast from Schedule 3 of the Growth Plan must be accommodated in housing units. The outlook for housing types is expected to be a key part of the planning implications of the population forecasts, as the Growth Plan is implemented. If Waterloo Region is to achieve the population growth forecast in the Growth Plan, it is necessary to consider the mix of housing types required to address the housing needs and preferences of the projected population.

Altus Group Economic Consulting prepared projections of housing demand between 2006 and 2031 for Waterloo Region, based on the population forecast in Schedule 3 of the Growth Plan. The “base” housing demand projection reflects the projected age distribution of Waterloo residents, and age-specific

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Page 3
headship rates and propensities to occupy different housing types. This base housing projection excludes off-campus housing required for post-secondary students, and is not adjusted to reflect the Growth Plan intensification target.

<table>
<thead>
<tr>
<th>Projected Housing Demand, 2006 to 2031</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excluding Housing for Students and Before Policy Based Adjustment</strong></td>
<td></td>
</tr>
<tr>
<td>Single and Semi-Detached Houses</td>
<td>61,700</td>
</tr>
<tr>
<td>Row Houses</td>
<td>18,650</td>
</tr>
<tr>
<td>Apartments</td>
<td>17,650</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98,000</strong></td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting based on the Growth Plan for the Greater Golden Horseshoe, Schedule 3

### 2.3 HOUSING FOR POST-SECONDARY STUDENTS

Municipalities in Ontario must plan to meet people's needs for daily living throughout an entire lifetime, including their housing needs. The Region of Waterloo has a very large post-secondary student population because it is home to two universities and a community college. As most students living off-campus are temporary residents of the Region, they are not reported in the Census and they are not included in Schedule 3 of the Growth Plan. In assessing the adequacy of the Region's housing supply, allowance must be made for the housing needs of students.

The University of Waterloo and Wilfred Laurier University are located in the City of Waterloo. Over the 2006 to 2011 period, the number of students requiring housing off-campus increased by approximately 5,443 persons.

The 2011 Census indicates that the total number of private dwellings in Waterloo Region increased by 15,033 units, while the number of dwellings occupied by usual residents of the Region increased by 13,479 units. The difference (1,554 units) is generally consistent with the number of units that would be occupied by the additional students requiring off-campus housing (5,443 persons at an average of 3.5 persons per unit).³

---

³ MMM Group, City of Waterloo Student Accommodation Study, March 14, 2012, page 8
⁴ The increase in private dwellings not occupied by Census population was almost entirely focused in the City of Waterloo.
The City of Waterloo forecasts the number of students requiring off-campus housing will increase from 25,030 persons in 2011 to 30,029 persons in 2017, and continue to increase at a rate of 1.5% per year over the longer term. At an average of 3.5 persons per unit, an additional 3,430 new housing units will be required off-campus to accommodate additional students at the University of Waterloo and Wilfred Laurier University.

Conestoga College is also expanding, and additional housing will be required to accommodate the increase in out-of-town students attending the College’s campuses in Waterloo Region. Student enrolment at Conestoga College is expected to increase by approximately 1,170 pupils over the 2011 to 2021. As approximately 20% of Conestoga College students require housing in the community, housing will be required for an additional 230 students. Assuming an average of 3.5 persons per unit, an additional 60 housing units would be required.

The total number of off-campus housing units occupied by students whose usual place of residence is not Waterloo Region is projected to increase by approximately 5,000 units over the 2006 to 2031 period. This land budget assumes that all of the additional housing occupied by students will be in apartments and that all of the new apartments for students will be constructed within the built-up area. The additional 5,000 units of housing for students would bring the total housing requirement up to approximately 103,000 units over the 2006 to 2031 period.

2.4 HOUSING MIX ADJUSTMENT FOR INTENSIFICATION

The base housing demand projection outlined above reflects expected market demand. As there is little potential to accommodate new single and semi-detached houses inside the built-up area, a significant shift in demand by housing type (from singles and semis to row houses and apartments) would be required to achieve the Growth Plan intensification target of 40% of all new residential development within the built-up area beginning in 2015.

Policy 2.C.2 of the proposed new Waterloo Region Official Plan provides for an intensification target of 45%, and the Region’s intensification target is utilized
in this land budget. As illustrated in Figure 2, the demand for more than 20,000 single detached units would have shifted to apartments and row houses to achieve the Region's intensification target of 45%.

Figure 2

<table>
<thead>
<tr>
<th>Housing Forecast, 2006 to 2031 Including Housing for Students, with Mix Adjusted for Intensification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market</strong></td>
</tr>
<tr>
<td>Forecast</td>
</tr>
<tr>
<td>Single and Semi-Detached Houses</td>
</tr>
<tr>
<td>Row Houses</td>
</tr>
<tr>
<td>Apartments</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting based on the Growth Plan for the Greater Golden Horseshoe, Schedule 3

2.5 RESIDENTIAL INVENTORY

MHBC Planning has compiled an inventory of the potential housing supply in the Region of Waterloo as of mid-2011. The inventory includes:

- Unbuilt units in registered, draft approved and pending plans of subdivision;
- Estimates of the potential number and mix of housing units that could be built on other vacant lands designated for residential development; and
- A breakdown between units planned inside the built-up area and in the Designated Greenfield Area.

According to policy 5.4.1.5 of the Growth Plan, municipalities are encouraged to go beyond the minimum standards unless doing so would conflict with any policy in the Growth Plan or the Provincial Policy Statement. The Region of Waterloo does not appear to have considered whether going beyond the 45% intensification target would have an impact on the ability of Waterloo Region to maintain an appropriate range of housing types and densities to meet the projected requirements of current and future residents, and whether this might have an impact on its ability to attract the population and employment growth provided for in Schedule 3.
The housing inventory does not include estimates of the redevelopment potential of underutilized sites inside the built-up area or smaller infill opportunities. Achievement of the 45% intensification target will require additional supply from these sources.

2.6 ADEQUACY OF THE HOUSING SUPPLY

2.6.1 Inside the Built-Up Area

In order to achieve a 45% intensification target over the 2006 to 2031 period, approximately 46,350 units will have to be constructed inside the built-up area. The total housing stock inside the built-up area increased by approximately 7,333 units over the mid-2006 to mid-2011 period, and as of mid-2011 there was potential for an additional 3,741 units remaining in planned developments. This land budget assumes that there will be potential found within the built-up area to accommodate the additional 35,276 units required to achieve the 45% intensification target. Figure 4 shows projected development within the built-up area.
2.6.2 Comparison of Requirements and Supply

The forecast housing requirements (adjusted to achieve 45% intensification) are compared to the total potential housing supply to assess the adequacy of the housing supply in Waterloo Region.

<table>
<thead>
<tr>
<th>Projected Requirements (adjusted for 45% intensification)</th>
<th>Townhouses / Ground-Related</th>
<th>Apartments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singles / Semis</td>
<td>41,000</td>
<td>21,000</td>
<td>41,000</td>
</tr>
<tr>
<td>45% Assumed to be Accommodated Inside Built-Up Area</td>
<td>1,476</td>
<td>5,074</td>
<td>36,600</td>
</tr>
<tr>
<td>Balance to be Accommodated in Designated Greenfield Area</td>
<td>39,524</td>
<td>15,926</td>
<td>1,200</td>
</tr>
</tbody>
</table>

**Figure 5 Adequacy of Housing Supply, Region of Waterloo, 2006 to 2031**

<table>
<thead>
<tr>
<th>Supply in Existing Designated Greenfield Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Permits 2006-2011</td>
</tr>
<tr>
<td>Planned Inventory, Mid-2011</td>
</tr>
<tr>
<td>Total Supply in Designated Greenfield Area</td>
</tr>
<tr>
<td>Shortfall</td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting based on data from MHC

The Region is required to plan for the adequate provision of a full range of housing. The potential supply of single and semi-detached houses falls short of projected requirements by approximately 12,870 units. The potential supply of townhouse/ground-related units falls short of projected requirements by approximately 6,069 units. Expansion of settlement area boundaries will be needed to provide for the additional housing required to accommodate the population growth forecast for Waterloo Region.

2.7 RESIDENTIAL AND RELATED LAND REQUIREMENTS

Settlement area expansions will be planned to contribute to the creation of complete communities and achievement of the Growth Plan density target. New neighbourhoods will contain a mix of residential, retail, workplace and institutional uses and a range of housing that meet people’s needs and is transit-supportive. This land budget assumes approximately 20% of housing units planned for new designated greenfield areas will be apartments.

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\(^3\) It is important to note that the projected shortfall is not based on the unrestricted market demand for singles and semis. This calculation assumes a very substantial shift in demand from singles and semis to apartments. In the absence of the assumed shift in housing mix, the shortfall of singles and semis would amount to 33,570 units. If the Growth Plan intensification target of 40% were used, the shortfall of singles and semis would amount to approximately 16,900 units.
although many of the apartments planned for the existing and new designated greenfield area are unlikely to be built before 2031.

Figure 6 shows the calculation of the additional land required to provide an adequate range of housing and other uses required to accommodate and achieve the population growth forecast for Waterloo Region in the Growth Plan.

<table>
<thead>
<tr>
<th>Housing Mix in Expansion Area</th>
<th>Units</th>
<th>Units per Net Hectare</th>
<th>Hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singles / Semis</td>
<td>12,870</td>
<td>25</td>
<td>515</td>
</tr>
<tr>
<td>Townhouses / Ground-Related</td>
<td>6,069</td>
<td>40</td>
<td>152</td>
</tr>
<tr>
<td>Apartments</td>
<td>4,734</td>
<td>100</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>23,673</td>
<td></td>
<td>714</td>
</tr>
</tbody>
</table>

Additional Land Required to Accommodate Full Range of Uses in New Communities | 584

Total Land Requirement | 1,298

Source: Altus Group Economic Consulting

A settlement area boundary expansion of approximately 1,298 hectares will be required to accommodate to the projected housing shortfall, along with the other land uses required to ensure that development in the new designated greenfield areas contributes to creating complete communities. If an intensification target of 40% were used in the analysis, the total land requirement would be larger.

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Sufficient allowance must be provided to accommodate a wide range of uses including parks, schools, recreation facilities, retail stores and services, places of worship, roads, storm water facilities, and other infrastructure and facilities. These uses are assumed to account for 45% of the land area in the new designated greenfield area.
3 Adequacy of the Employment Land Supply

In 2006, the Region of Waterloo prepared an Industrial and Business Park Vacant Land Inventory and Demand Analysis as part of the Regional Land Budget process. The Region's 2006 analysis found:

- The total inventory of vacant industrial and business park land was estimated to amount to 3,273.64 acres (1,325 hectares) in 2006;
- Allowing for lands subject to significant constraints to development and lands anticipated to be converted to other uses, the Region's effective inventory of vacant industrial and business park lands was 2,523.89 acres (1,022 hectares); (page 19)
- Over the 2001 to 2031 period, total employment in Waterloo Region is forecast to grow by 130,000 jobs (page 41);
- Approximately 24,000 jobs were estimated to be created over the 2001 to 2005 period, leaving approximately 106,000 jobs to be over the period to 2031 period;
- Approximately 42,400 new jobs (40%) are expected to be located within industrial and business parks; (page 41)
- Approximately 40% of the new jobs within industrial and business parks are expected to be accommodated through intensification, leaving 25,800 new jobs to be accommodated through development on vacant parcels; (page 42)
- Only the effective inventory of vacant parcels was assumed to be available to accommodate development to 2031 (1,773.09 acres (717.57 hectares) of serviced land and 750.8 acres (303.8 hectares) of unserviced land) (page 43);
- The effective inventory of vacant employment land could potentially accommodate the forecasted employment growth, assuming an average of 29.67 jobs per hectare for serviced employment land and 14.84 jobs per hectare for unserviced employment land (page 43);
- While the total quantity of the employment land could potentially accommodate the forecasted growth, not all of the employment land available was found to be suitable to accommodate the specific needs of the diverse range of new and expanding businesses that need to be accommodated in Waterloo Region (page 43).
April 23, 2012

- Additional employment lands were found to be required to ensure the immediate and consistent availability of large lot industrial land, a variety of lands for purchase, and a range of tenure opportunities (page 43).
- The report concluded that additional employment lands were required to maintain a range and choice of suitable sites for a wide range of economic uses and ancillary activities, including 300 net hectares of fully serviced Prime Industrial/Strategic Reserve land and 100 net hectares of unserviced Prime Industrial land was required (pages 44 and 45). These lands are over and above lands currently designated for industrial and business park purposes in local municipal official plans.

Regional Official Policies Plan Amendment No. 28 provided for a settlement area boundary expansion to accommodate approximately 150 net hectares of employment land (Prime Industrial/Strategic Reserve).

The new Waterloo Region Official Plan incorporates two additional settlement area boundary expansions to address the need for additional employment land (in Cambridge and North Dumfries), amounting to approximately 254 hectares.
4 ANALYSIS OF DESIGNATED GREENFIELD AREA DENSITY

4.1 ESTIMATE OF THE DESIGNATED GREENFIELD AREA

The Growth Plan requires that the designated greenfield area of Waterloo Region be planned to achieve a minimum density target that is not less than 50 residents and jobs combined per hectare.

MHBC Planning has analyzed the lands within existing settlement area boundaries in Waterloo Region to determine the base land area to be used in calculating planned density for the existing designated greenfield area. The designated greenfield area is divided between areas designated for employment lands (business parks, industrial land and major retail uses) and areas designated for all other types of uses found in settlement areas (residential development, commercial and institutional uses, parks, etc.).

4.2 EXISTING EMPLOYMENT LANDS

Waterloo Region's inventory of employment lands in the existing designated greenfield area amounts to approximately 1,861 hectares. The inventory includes a variety of different types of employment areas including research and technology office parks, fully serviced industrial areas, major retail developments, and industrial areas on private services. MHBC Planning examined plans for the various employment areas in the Region, estimated the planned employment density of the individual areas, and determined that the Region's existing employment lands are planned to accommodate approximately 80,361 jobs. The average planned density of Waterloo's existing employment lands in the designated greenfield area is approximately 51.50 jobs per hectare.

4.3 RESIDENTIAL AND COMMUNITY LANDS IN THE EXISTING DESIGNATED GREENFIELD AREA

MHBC Planning has estimated the portion of the designated greenfield area available for residential and related development amounts to approximately 3,369 hectares.

The planned density of the residential and community lands in the existing designated greenfield area was estimated based on new housing units constructed in the designated greenfield area over the period from mid-2006
to mid-2011 and the remaining inventory of housing units planned for the existing designated greenfield area, as of mid-2011.

In order to estimate the planned density of residents and jobs per hectare, it is necessary to make assumptions regarding the average number of persons per dwelling unit (PPU). For the purposes of this analysis, the PPU values for new development used in the Waterloo Region 2012 Revised Land Budget are utilized:

- 3.25 persons per unit for single and semi-detached houses;
- 2.44 persons per unit for townhouses/ground-related; and
- 1.77 persons per unit for apartments.\(^{10}\)

A number of other adjustments and additions are required to estimate the total number of residents and jobs planned for communities in the designated greenfield area:

- A 5% adjustment is added to the projected population in new units for the Census undercount;\(^{11}\)
- Approximately half of the projected growth in institutional residents in Waterloo Region\(^{12}\);  
- Population-related employment (an average of 13 employees per 100 residents)\(^{13}\); and
- Existing residents and jobs living in the designated greenfield area (outside of plans)\(^{14}\).

\(^{10}\) The 2006 Census indicated that the average household size of dwelling units constructed in 20 years prior to the Census was 3.3 PPU for singles and semis, 2.48 PPU for row houses and 1.83 PPU for apartments. With the exception of apartments, the 2001 and 2006 Census generally indicate a downward trend in the average household size of newly constructed housing units. The Region has been requested to provide information regarding the basis of derivation of the household sizes assumed in the Region's 2012 Land Budget.

\(^{11}\) The Schedule 3 population includes an adjustment for Census undercount, and Hermon Consulting, Growth Outlook for the Greater Golden Horseshoe is shown as the source of the Schedule 3 forecasts. The Hermon report incorporates a 5% Census undercount adjustment in the 2031 forecast for Waterloo Region.

\(^{12}\) Region of Waterloo, Revised Land Budget, 2012 forecasts a total increase of 7,400 institutional residents over the 2006 to 2031 period (page 24).

\(^{13}\) Population-related employment includes persons working at home, retail stores and services, elementary and secondary schools, etc. Some of the employment related to population growth in the designated greenfield area is expected to be accommodate in the Urban Growth Centres.
Figure 7 shows the calculation of the total number of residents and jobs planned for the existing residential communities of the designated greenfield area. These communities are being planned to achieve an average of 49.87 residents and jobs per hectare, at full build out.

<table>
<thead>
<tr>
<th>Planned Density of Existing Residential Designated Greenfield Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Units</strong></td>
</tr>
<tr>
<td>Single / Semi</td>
</tr>
<tr>
<td>Townhouses / Ground-Related</td>
</tr>
<tr>
<td>Apartments</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>Adjustments for Census Undercount (5%)</td>
</tr>
<tr>
<td>Institutional Population</td>
</tr>
<tr>
<td>Population-Related Employment (including work at home)</td>
</tr>
<tr>
<td>Existing residents and jobs in the DGA</td>
</tr>
<tr>
<td><strong>Total Estimated Residents and Jobs</strong></td>
</tr>
<tr>
<td>Residential and Related DGA</td>
</tr>
<tr>
<td>Average Residents and Jobs per Hectare</td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting based on data from MHBC Planning and Region of Waterloo

4.4 SETTLEMENT AREA BOUNDARY EXPANSION FOR EMPLOYMENT USES

The new Regional Official Plan incorporated approximately 254 hectares of settlement area boundary expansions for employment uses. These expansions have not yet been approved. However, we have included them in the future designated greenfield area for the purposes of this land budget. The settlement area boundary expansion in Cambridge is intended to provide for additional Prime Industrial/Strategic Reserve Land and is planned to achieve an average of 25 employees per hectare. The settlement area boundary expansion in North Dumfries is planned for employment uses on private services and is also planned to achieve an average of 25 jobs per hectare.

10 Region of Waterloo Land Budget, April 30, 2009, page 11.
4.5 SETTLEMENT AREA BOUNDARY EXPANSION FOR RESIDENTIAL AND RELATED USES

Figure 8 shows the calculation of residents and jobs for the settlement area boundary expansion required to accommodate projected residential and related employment growth in Waterloo Region.

<table>
<thead>
<tr>
<th>Estimated Density of Proposed Residential Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Units</td>
</tr>
<tr>
<td>Single / Semi</td>
</tr>
<tr>
<td>Townhouses / Ground-Related</td>
</tr>
<tr>
<td>Apartments</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Adjustment for Census Undercount (5%)</td>
</tr>
<tr>
<td>Population-Related Employment (including work at home)</td>
</tr>
<tr>
<td>Total Estimated Residents and Jobs</td>
</tr>
<tr>
<td>Residential and Related DGA</td>
</tr>
<tr>
<td>Average Residents and Jobs per Hectare</td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting based on data from MHBC Planning and Region of Waterloo

The new residential designated greenfield area can be planned at a density of approximately 59.10 residents and jobs per hectare.

4.6 OVERALL DENSITY

Figure 9 shows the calculation of the average planned density over the entire designated greenfield area, including the settlement area boundary expansion incorporated in the new Regional Official Plan to accommodate the employment growth forecast and the settlement area boundary expansion required to provide an adequate range of housing to accommodate the population forecast for Waterloo Region. The estimated overall density is 51.14 residents and jobs per hectare. The Growth Plan requires that the designated greenfield area of the Region be planned to achieve a minimum density that is not less than 50 residents and jobs combined per hectare.
### Calculation of Planned Density of Designated Greenfield Area

<table>
<thead>
<tr>
<th></th>
<th>Hectares</th>
<th>Residents and Jobs</th>
<th>Density (P+J)/Hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Employment Areas</td>
<td>1,561</td>
<td>80,361</td>
<td>51.50</td>
</tr>
<tr>
<td>Existing Residential and Related Areas</td>
<td>3,369</td>
<td>168,024</td>
<td>49.87</td>
</tr>
<tr>
<td>Employment Area Expansion</td>
<td>254</td>
<td>6,350</td>
<td>25.00</td>
</tr>
<tr>
<td>Required Residential Area Expansion</td>
<td>1,298</td>
<td>78,718</td>
<td>59.10</td>
</tr>
<tr>
<td>Overall Average Planned Density</td>
<td>6,482</td>
<td>331,453</td>
<td>51.14</td>
</tr>
</tbody>
</table>

Source: Altus Group Economic Consulting
5 CONCLUSIONS

The following conclusions can be drawn from the analysis presented in this land budget:

- Waterloo Region analysed the supply and demand for land in business parks and industrial areas. The Region’s analysis found that sufficient opportunities were not available through intensification and in existing designated greenfield areas to maintain the range and choice of suitable sites for employment uses needed to accommodate the 366,000 jobs forecast for Waterloo Region in 2031. A settlement area boundary expansion was approved in 2009 to address part of this need. Additional settlement area expansions are incorporated in the new Regional Official Plan to provide additional employment land to address the need identified by the Region.

- Sufficient opportunities are not available through intensification and in existing designated greenfield areas to provide the appropriate range of housing types and densities to meet the requirements of the 729,000 residents forecast for the Region by 2031. A settlement area boundary expansion of approximately 1,298 hectares is required to address this need.

- The employment land expansion, in isolation, would reduce the average planned density in the designated greenfield area. The planned density of the new employment lands is only 25 jobs per hectare.

- As new residential communities in the expansion area can be planned to achieve densities significantly higher than 50 residents and jobs per hectare, the combination of residential and employment communities in the expansion area can be planned to achieve an overall planned density of more than 50 persons and jobs per hectare across the designated greenfield area in Waterloo Region.
Attachment D

LAND INVENTORY ANALYSIS
REGIONAL MUNICIPALITY OF WATERLOO
APRIL 2012
SUMMARY OF FIGURES, TABLES AND APPENDICES

FIGURES
2. Identification of Lands that are not designated for Development, Provincial Features and Other Lands Not Available for Residential Development/Other Features.
3. Planning Status of Lands in the DGA.
4. Land Use Classification - Residential/Employment.
5. Employment Land Categorization.
6. Targeted Intensification Areas.

TABLES
2. DGA Land Area Calculations by Area Municipality.
5. Residential Inventory – DGA (by Municipality).
7. Summary of Vacant Registered and Draft Plan Inventory within the Built Boundary (Spring 2011).

APPENDICES
A. Summary list – Lands not Designated for Development.
B. Employment Density Inputs.
C. Identification of Lands to be Considered for Deletion from Township Urban Areas.
D. Identification of Lands Designated but Not Likely Available for Development.
INTRODUCTION

MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) is part of a multi-disciplinary project team retained by Activa Holdings Inc. to prepare a land budget to inform decisions to be made regarding a proposed Official Plan for the Region of Waterloo (ROP) that is the subject of ongoing appeals before the Ontario Municipal Board. One of the objectives in preparing a land budget is to come to a determination regarding the need to expand settlement area boundaries to accommodate growth forecasts to the year 2031 for the Region of Waterloo as contained in Schedule 3 of the Places to Grow, Growth Plan for the Greater Golden Horseshoe (Growth Plan).

Should the land budget process confirm the need for an expansion to accommodate residential and/or employment growth forecasts, Activa proposes that lands in Southwest Kitchener be evaluated and considered as part of a process that includes the evaluation of alternative directions for growth. The consideration of alternative directions for growth will occur as part of subsequent phases of the on-going Ontario Municipal Board process regarding the ROP.

MHBC’s role in preparing the land budget has focused on the “supply side” of the analysis, including:

- Undertaking an inventory assessment of both residential and non-residential lands in the Region;
- Preparing an estimated inventory of the supply of residential units by housing type in the Built-up Area (BUA) and the Designated Greenfield Area (DGA) in the Region available to accommodate residential growth between 2006 and 2031;
- Assessing the planned development potential of lands planned for employment uses in the Region.

The land budget analysis is intended to reflect an assessment of housing demand by unit types compared against available supply (generally consistent with the Provincial Projection Methodology Guideline), with adjustments and analyses required to conform with the policy directions of the Growth Plan, to determine the Region’s land needs for residential development. This report assesses residential supply and the planned density of the DGA as input to the other component of the land budget analysis being undertaken by Altus Group, being an analysis of housing demand and the need for a settlement area boundary expansion for the Region to accommodate the 2031 forecasts of population and employment set out in Schedule 3 of the Growth Plan.

It is noted that discussions are underway with staff of the Regional Municipality of Waterloo with the intent of reaching agreement regarding factual information and assumptions to the extent possible. This report may be updated as a result of ongoing dialogue and additional information.
BACKGROUND

The 2005 Provincial Policy Statement (PPS) provides overall policy direction on matters of provincial interest related to land use planning and development in Ontario. The Growth Plan, which took effect on June 16, 2006, applies to the provincial planning area referred to as the Greater Golden Horseshoe (GGH). The overall policy thrust of the Growth Plan is similar to the PPS. The policy framework guides decisions in matters relating to land use, intensification, infrastructure, land use patterns, transportation, employment and housing. The Growth Plan sets out a Vision for 2031 as well as policies on “Where and How to Grow”. However, the Growth Plan includes growth forecasts and more specific policy direction including intensification and density targets.

Population and employment forecasts are contained in Schedule 3 of the Growth Plan and are required to be used for planning and managing growth in the GGH. The population and employment forecasts for the Region of Waterloo are set out in Table 1.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>POPULATION AND EMPLOYMENT FORECASTS FOR THE REGION OF WATERLOO 2001-2031</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POPULATION</td>
</tr>
<tr>
<td>Region of Waterloo</td>
<td>456</td>
</tr>
</tbody>
</table>

Note: The growth forecasts are per Schedule 3 of the Growth Plan for the Greater Golden Horseshoe, 2006. All figures in 000’s.

This analysis is based on the population and employment forecasts contained in Schedule 3 of the Growth Plan, in conformity with Policy 2.2.1 of the Growth Plan which directs that population and employment forecasts contained in Schedule 3 will be used for planning and managing growth.

The population and employment forecasts are to be distributed between the area defined by the Growth Plan as the Built-up Area and the Designated Greenfield Area. The vast majority of growth has occurred in the City and Township Urban Areas of the approved Regional Official Policies Plan. The Built-up Area and the Designated Greenfield Area associated with the approved City and Township Urban Areas are identified on Figure 1.
LAND AREA CALCULATIONS

Calculating the Net Land Area Designated For Development in the DGA (the Denominator) for Undertaking Density Calculations

Policy 2.2.7 of the Growth Plan provides direction regarding the measurement of densities in the Designated Greenfield Area. Policy 2.2.7.3 reads as follows:

“This density target will be measured over the entire designated greenfield area of each upper-or single-tier municipality, excluding the following features where the features are both identified in an applicable official plan or provincial plan, and where the applicable provincial plan or policy statement prohibits development of the features: wetlands, coastal wetlands, woodlands, valley lands, areas of natural and scientific interest, habitat of endangered species and threatened species, wildlife, wildlife habitat, and fish habitat. The area of the features will be defined in accordance with the applicable provincial plan or policy statement that prohibits development in the features.”

The Growth Plan defines designated greenfield area as:

“The area within a settlement area that is not built-up area. Where a settlement area does not have a built boundary, the entire settlement area is considered designated greenfield area.”

Settlement Areas are defined by the Growth Plan as follows:

“Urban areas and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) where:

a) development is concentrated and which have a mix of land uses; and

b) lands have been designated in an official plan for development over the long term planning horizon provided for in the Provincial Policy Statement, 2005. Where there are no lands that have been designated over the long-term, the settlement area may be no larger than the area where development is concentrated.”

The Net DGA Land Area is the denominator to be used in undertaking the density target calculations for the purposes of applying the policies of the Growth Plan.

The first step in calculating the Net DGA Land Area is to identify and delineate, and then calculate the “gross” land area of, the Region’s Urban Areas that are outside the Built-up Area. Rural Settlement Areas and Industrial/Commercial Areas that have not been assigned a built boundary by the Province and/or are currently planned for private services do not have significant development potential and have not been considered as a component of the Region’s Designated Greenfield Area.

Breslau, the Eldale Road Rural Settlement, the Mercedes Industrial/Commercial Area and the Highway 401 and 97 Industrial/Commercial Area are symbolically identified in the approved Regional Official Policies Plan as Rural Settlements and/or Industrial/Commercial Areas. Breslau and the Mercedes Industrial/Commercial Area are subject to special policies in the approved Regional Plan. There are also special official plan policies detailed in the Township of Woolwich Official Plan for all four areas. Although these areas are not within a designated Township Urban Area, they are assumed to form part of the Designated Greenfield Area in order to have a base comparison with the Region’s land budget.
The gross area of the Region's Urban Areas outside the Built-up Area is calculated to be approximately 6,699 hectares.

To calculate the Net DGA Land Area the gross land area of the Region's Urban Areas outside the Built-up Area is reduced by the area of environmental features identified in policy 2.2.7.3 of the Growth Plan and other areas that are not designated for development.

Policy 2.2.7.3 of the Growth Plan provides that the listed features are to be excluded from the area of the Designated Greenfield Area for the purposes of applying the density target, provided that they are identified in an applicable official plan or provincial plan, and the applicable provincial plan or policy statement prohibits development in the features. The area of the features is defined in accordance with provincial plan or policy statement that prohibits development.

The features listed in Policy 2.2.7.3 of the Growth Plan are identified in the Provincial Policy Statement and in particular, Section 2.0 “Wise Use and Management of Resources”. Growth Plan Policy 2.2.7.3 does not contemplate that locally significant features (e.g., woodlands < 4 hectares in size), can be included as “takeouts” for the purposes of calculating the Net DGA Land Area, even though official plan policies may otherwise prohibit development.

The Province’s Natural Heritage Reference Manual recommends technical criteria and approaches for identifying/delineating features to implement the PPS. A number of other documents and sources of information were reviewed to assist in identifying, interpreting and delineating features listed in Policy 2.2.7.3 including:

- the approved ROPP and the adopted ROP
- approved and proposed lower-tier official plans
- community plans and secondary plans
- approved and in progress subwatershed studies
- MNR wetland mapping
- GRCA wetland mapping
- approved and proposed Environmental Reports
- draft approved and registered plans
- EEAC minutes and reports
- surveyed limits of features
- aerial photography
- field reconnaissance, communications and in-house file information
- shape files provided by the Regional Municipality of Waterloo

The mapping of habitat of threatened and endangered species (in some instances) was based on secondary sources of information and may be subject to adjustments. Available files/mapping have been requested from the Region, but have not been provided as of the date of this report.

Floodplain lands, which may not be included in significant valleylands, in which development is prohibited by the PPS and applicable official plan plans were also excluded from the calculation of Net DGA Land Area. Finally, other lands not designated for development including existing cemeteries, railways, infrastructure and corridors and lands not planned for development within the planning horizon of the approved ROPP were excluded from the calculation of Net DGA Land Area. The areas are summarized in Appendix A.

The Net DGA Land Area designated for development is calculated to be approximately 4,929.56 hectares. Table 2 summarizes the Net DGA Land Area by lower-tier municipality.
<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>GROSS AREA OF DESIGNATED GREENFIELD AREA</th>
<th>NET DGA LAND AREA SUMMARY</th>
<th>DEVELOPABLE AREA (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NET CONSTRAINED: RES</td>
<td>NON-RES</td>
</tr>
<tr>
<td>City of Waterloo</td>
<td>964</td>
<td>171.76</td>
<td>502.38</td>
</tr>
<tr>
<td>City of Kitchener</td>
<td>2,315</td>
<td>679.29</td>
<td>1,462.22</td>
</tr>
<tr>
<td>City of Cambridge</td>
<td>1,829</td>
<td>406.14</td>
<td>766.74</td>
</tr>
<tr>
<td>Township of Woolwich</td>
<td>932</td>
<td>328.06</td>
<td>332.29</td>
</tr>
<tr>
<td>Township of Wellesley</td>
<td>53</td>
<td>13.98</td>
<td>37.02</td>
</tr>
<tr>
<td>Township of Wilmot</td>
<td>326</td>
<td>89.39</td>
<td>157.21</td>
</tr>
<tr>
<td>Township of North Dumfries</td>
<td>280</td>
<td>80.98</td>
<td>111.69</td>
</tr>
<tr>
<td><strong>SUB-TOTALS</strong></td>
<td><strong>6,699</strong></td>
<td><strong>1,769.6</strong></td>
<td><strong>4,929.56</strong></td>
</tr>
</tbody>
</table>

**NOTE:**
1. MHBC’s residential area calculations include Population Serving Employment lands (i.e., schools, churches and neighbourhood serving retail/commercial services).
2. Constrained lands include lands not designated for development and Provincial features.
3. Totals may not add due to rounding.
CALCULATING THE NET DEVELOPABLE LAND AREA AVAILABLE FOR DEVELOPMENT IN THE DGA

The Net Developable DGA Land Area is not the same as the Net DGA Land Area to be used in Growth Plan density target calculations. The Net Developable DGA Land Area also excludes all lands on which development is prohibited that were not excluded from the Net DGA Land Area. The Net Developable DGA Land Area provides a “coarse” indication of land in the DGA that is actually available for development and is used to calculate the inventory or supply of housing and employment land actually available to accommodate growth.

The Net Developable DGA Land Area is calculated to be approximately 4,449 ± hectares.

Figure 2 illustrates the lands not designated for development, provincial features (net) and other lands not available for development/constraints (net/net).
HOUSING SUPPLY ANALYSIS

General Methodology/Approach to Determining Supply

Since the base year for the land budget analysis is 2006, it is necessary to take into account additions and deletions from land supply since 2006 (reflected through building permit and demolition data) and the inventory of housing units available on "vacant" lands.

Generally, available residential supply on currently vacant lands falls into the following categories:

i. Vacant lots and blocks within registered plans of subdivision.

ii. Vacant/available units associated with approved site plans located within the DGA but outside registered plans of subdivision.

iii. Lands subject to draft approved but unregistered plans of subdivision.

iv. Lands subject to pending plans of subdivision that have been proposed but not draft plan approved.

v. Lands with an approved residential official plan land use designation with refinement through a secondary planning and/or community planning process (and not subject to a proposed plan of subdivision or site plan).

vi. Lands with an approved residential official plan land use designation but without refinement through a secondary plan and/or community planning process (and not subject to a proposed plan of subdivision or site plan).

vii. Lands that are within a settlement area intended for development (i.e. no amendment to the approved Regional Official Policies Plan is required) and without an official plan land use designation or direction at the lower-tier level (and not subject to a proposed plan of subdivision or site plan).

Lands in categories v, vi and vii are generally referred to as "uncommitted" in this report. The available supply was categorized by planning status (Figure 3). Much of the DGA is subject to registered plans, draft approved plans, approved site plans, current/pending plans, detailed secondary/community plans or the lands have been analyzed/assessed in the context of ongoing planning process.

In order to relate supply to future needs, developed units within the DGA must be benchmarked to a time period. The housing supply estimated in this analysis is net of sites, lots or blocks for which building permits have been issued between June, 2006 and June 2011. This approach is consistent with the Province’s “Projection Methodology Guideline”.

The June 2006-2011 building permit timeframe was selected for a number of reasons:

- The Growth Plan came into effect on June 16, 2006.
- 2006 Census information is available.
- 2011 Census information is available (population and total households).
- Annual monitoring reports and in particular, City of Kitchener reports relate to the effective date of the Growth Plan (June 16, 2006).
- Available inventory can be “benchmarked” to the 2011 Census.

Building permit statistics were obtained from lower-tier municipalities as well as by way of license agreement with the Regional Municipality of Waterloo. Building permit statistics from these sources were validated against CMHC data. There is a close correlation between data sources. Minor discrepancies were found and relate to the Townships (Wilmot and Wellesley). Building permit statistics for these Townships were not directly available, and it was deemed necessary to field verify Township building permits and construction. Meetings with Regional staff have confirmed there are no significant differences in the building permit data that was compiled by MHBC and the Region’s building permit data, relating to both the DGA and the Built-up Area.

Building permit data for the DGA is summarized in Table 3. The building permit data was referenced back to registered plans and used to determine available units within registered plans, as of July 1, 2011.

<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>Single/Semi</th>
<th>%</th>
<th>Townhouse/Multi</th>
<th>%</th>
<th>Apartment/Other</th>
<th>%</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterloo</td>
<td>615</td>
<td>65.92%</td>
<td>201</td>
<td>21.54%</td>
<td>117</td>
<td>12.54%</td>
<td>933</td>
</tr>
<tr>
<td>Kitchener</td>
<td>2,952</td>
<td>73.66%</td>
<td>815</td>
<td>20.35%</td>
<td>240</td>
<td>5.99%</td>
<td>4,007</td>
</tr>
<tr>
<td>Cambridge</td>
<td>1,163</td>
<td>70.40%</td>
<td>450</td>
<td>27.24%</td>
<td>39</td>
<td>2.36%</td>
<td>1,652</td>
</tr>
<tr>
<td>Woolwich</td>
<td>832</td>
<td>84.90%</td>
<td>140</td>
<td>14.29%</td>
<td>8</td>
<td>0.82%</td>
<td>980</td>
</tr>
<tr>
<td>Wellesley</td>
<td>218</td>
<td>100.00%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>218</td>
</tr>
<tr>
<td>Wilmot</td>
<td>623</td>
<td>92.67%</td>
<td>50</td>
<td>7.33%</td>
<td>0</td>
<td>0.00%</td>
<td>673</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>99</td>
<td>96.12%</td>
<td>4</td>
<td>3.88%</td>
<td>0</td>
<td>0.00%</td>
<td>103</td>
</tr>
</tbody>
</table>

**TOTAL RESIDENTIAL PERMITS** | 6,502 | 1,660 | 404 | 8,566 |
Vacant DGA Residential Land Inventory - Designated City and Township Urban Areas as of June, 2011

The Net Developable DGA Land Area represents a “coarse” estimate of land supply that needs to be refined and sorted as “inventory”, and then analyzed to determine the available housing supply. The residential supply analysis undertaken by MHBC analyzed the available supply of housing units by housing type on vacant lands in the Region as of July 1, 2011. This requires an understanding of the planning status of lands included as land inventory. The following table summarizes the general assumptions and methodology associated with each category. For each parcel of vacant development land in the identified inventory, MHBC estimated the supply of housing units by type based on the approach set out in the general methodology and assumptions table.

<table>
<thead>
<tr>
<th>Planning Status</th>
<th>Methodology and General Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the City or Township Urban Areas of the approved Regional Official Policies Plan (ROP), but with no lower-tier land use designation.</td>
<td>- Land use assumed (professional judgement)</td>
</tr>
<tr>
<td></td>
<td>- Assumed density based on consideration of urban structure and community character, density targets and other factors</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP) and designated so as to permit uses in the lower-tier official plans.</td>
<td>- Land use of the lower-tier plans considered</td>
</tr>
<tr>
<td></td>
<td>- Design, location, density targets and other factors taken into consideration</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP) designated so as to permit uses in the lower-tier official plans and/or subject to an approved/pending secondary plan and/or community plan.</td>
<td>- More refined land use of secondary plan and/or community plan considered</td>
</tr>
<tr>
<td></td>
<td>- More detailed design analysis and/or unit yield analysis</td>
</tr>
<tr>
<td></td>
<td>- Urban structure, policies, community character and other factors taken into consideration</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP) designated so as to permit uses in the lower-tier official plans and subject to recent/current pending plan or planning process.</td>
<td>- Intended unit yield and plans considered</td>
</tr>
<tr>
<td></td>
<td>- Median unit count if unit range shown otherwise calculated</td>
</tr>
<tr>
<td></td>
<td>- Design of some plans adjusted based on more current information</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP) designated so as to permit uses in the lower-tier official plans, zoned and draft plan approved.</td>
<td>- Intended unit yield and plans used</td>
</tr>
<tr>
<td></td>
<td>- Median unit number used if unit range identified</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP) designated so as to permit uses in the lower-tier official plan, zoned and subdivision plan has been registered and/or site plans approved.</td>
<td>- Used unit count of registered plans</td>
</tr>
<tr>
<td></td>
<td>- Reviewed approved/proposed site plans</td>
</tr>
<tr>
<td></td>
<td>- Used unit count of approved site plans</td>
</tr>
<tr>
<td></td>
<td>- Reviewed proposed lotting plans</td>
</tr>
<tr>
<td>Within the City or Township Urban Area of the approved Regional Official Policies Plan (ROP), designated in the official plan, zoned, subdivision plan has been registered as lots/blocks and subject to approved part lot control exemption by-law or approved site plan.</td>
<td>- Used unit count of registered plans</td>
</tr>
<tr>
<td></td>
<td>- Reviewed approved/proposed site plans</td>
</tr>
<tr>
<td></td>
<td>- Used unit count of approved site plans</td>
</tr>
<tr>
<td></td>
<td>- Reviewed actual/approved lotting plans</td>
</tr>
</tbody>
</table>
In order to complete/refine the residential supply analysis MHBC:

- Reviewed lower-tier official plans.
- Reviewed approved and/or proposed secondary plans and community plans.
- Reviewed copies of pending plans of subdivision within the DGA.
- Reviewed copies of draft approved plans within the DGA.
- Reviewed copies of registered plans of subdivision.
- Reviewed approved site plans known to MHBC and located within the DGA.
- Assessed ultimate land use for those lands within the City or Township Urban Areas without land use direction, but intended for development, using professional judgement.
- Undertook design analysis/design checks.
- Validated inventory reports/assessment undertaken by lower-tier municipalities
- Field verified/ground-truthed information, as required.
- Interviewed property owners and planning staff.
- Considered reports, information and experience acquired through active participation in a number of relevant planning processes in the Region, some of which have been completed and some of which are on-going.

It should be recognized that land supply is dynamic and in a constant state of flux. The objective should be to obtain a best estimate of supply. For example, this report accounts for the pending plan submitted for lands in Kitchener commonly referred to as the Trillium Community. It is understood draft plan approval may be imminent. If necessary, adjustments to the inventory can be made should there be significant changes to the inventory analysis between the date of this report and the hearing.

The residential housing unit supply in the Designated Greenfield Area estimated by MHBC in accordance with the above methodology is summarized in Table 5.
<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>PLAN TYPE</th>
<th>Single/ Semi</th>
<th>Townhouse/ Ground related</th>
<th>Apartment/ Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterloo</td>
<td>REGISTERED (UNBUILT)</td>
<td>618</td>
<td>136</td>
<td>882</td>
<td>1,636</td>
</tr>
<tr>
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<td><strong>8,197</strong></td>
<td><strong>12,986</strong></td>
<td><strong>41,334</strong></td>
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</table>

**NOTES:**
1. Although the Bridal and Eldale Road Rural Settlement Areas are not within a designated Township Urban Area, lands designated for development have been included in the Township of Woolwich calculations.
2. There is a proposed subdivision plan in Woolwich that requires an amendment to the ROPP. Lands associated with this plan are identified for employment purposes and are not identified as pending.
CALCULATING THE EXISTING/PLANNED DENSITY OF THE DGA

Growth Plan Policy 2.2.7.2 provides that designated greenfield areas are to be planned to achieve a minimum density target that is not less than 50 residents and jobs combined per hectare. The density target is to be applied to and measured against both residential and employment land uses. MHBC undertook an assessment of the planned density of employment lands in the Designated Greenfield Area, as input to the density calculations in the land budget.

It is necessary to undertake a land use classification process in order to calculate planned employment densities within the DGA.

Land use classifications were primarily based on lower-tier official plans (i.e. land use designations), secondary plans, zoning, land use, development proposals and/or land owner input to ongoing official plan review processes. It is noted that for the City of Cambridge, assumptions were required for lands that are within the designated City Urban Area but remain without direction regarding a preferred land use designation.

Lands were initially classified as either Residential or Non-residential (Employment). The classification is shown on Figure 4.

Employment lands fit into different employment categories. The employment categories typically have different employment densities and in some cases different planning/locational and policy considerations. Employment lands were further categorized as:

1. Major institutional/technology park/office. This employment category is characterized by buildings that generally exceed two storeys in height and have building floor areas greater than 2,300 square metres.

2. Major retail/Lifestyle Centre.

3. Employment lands.


5. Prime Industrial Strategic Reserve and Private serviced employment.

Employment land categories are shown on Figure 5 and employment density inputs are summarized in Appendix B. To the extent possible, density and/or employment projections were derived from background reports and studies specific to the lands in question. In some cases, in-house analysis and other land budget reports supplemented this information.

The employment density calculations assume lands in the undesignated settlement of Breslau (ROPPA) and located east of Hopewell Creek will be serviced and developed as employment lands (business park). These lands are currently unserviced and zoned for dry industrial uses.

The employment density calculations also assume the designated Prime Industrial Strategic Reserve Lands (lands designated by ROPPA 28) will be developed as large industrial parcels and at lower employment densities. The ROPPA 28 lands include many environmental features which together with other considerations will likely impose design limitations. Higher employment densities associated with business park development could materialize.
Consideration should be given to whether the Breslau lands could be planned to satisfy the Region's need for large lot industrial uses. Consideration should also be given to whether the ROPPA 28 lands should develop for business park purposes. The additional PISR expansion proposed by the adopted ROP may not be required as a result of these considerations.
IDENTIFICATION OF LANDS TO BE CONSIDERED FOR DELETION FROM EXISTING TOWNSHIP URBAN AREAS AND LANDS UNLIKELY TO BE AVAILABLE FOR DEVELOPMENT

As part of a comprehensive review process, it is appropriate to:

i. Identify/consider lands to be considered for deletion from existing Township Urban Areas. The intent is to identify lands that have no real development potential and/or that have been previously identified for deletion. Appendix C identifies lands to be considered for deletion from existing Township Urban Areas and the expanded Urban Area proposed by the adopted ROP.

ii. Identify lands that although designated are unlikely to be available for development over the next 20 years. Two areas have been identified at this time (Appendix D).

Although the proposed Eldale Township Urban Area expansion can be planned to achieve the density target of the Growth Plan (assuming serviceability), the lands are unlikely to be available for development within the next 20 years given Township planning policies. The available supply of land in the land budget may be overstated as a result.

The east Cambridge lands are undesigned in the Cambridge Official Plan, are isolated and unlikely to be serviced in the foreseeable future. The lands have been included as supply. MHBC have assumed these lands have limited development potential. Again, the available supply of lands could be overstated.
INTENSIFICATION – DEVELOPMENT WITHIN THE BUILT-UP AREA

The PPS and the Growth Plan have essentially the same definition of intensification. The Growth Plan defines intensification to mean:

"The development of a property, site or area at a higher density than currently exists through:

a) redevelopment, including the reuse of brownfield sites;
b) the development of vacant and/or underutilized lots within previously developed areas;
c) infill development; or
d) the expansion or conversion of existing buildings."

Policy 2.2.3 of the Growth Plan outlines general intensification policies. Policy 2.2.3.1 provides that:

"By the year 2015 and for each year thereafter, a minimum of 40% of all residential development occurring annually within each upper-and single-tier municipality will be within the built-up area."

The Growth Plan encourages intensification throughout the Built-up Area. Urban growth centres, intensification corridors and major transit station areas are identified as focus areas for intensification.

General background and studies have been undertaken by or on behalf of lower-tier municipalities to conceptualize intensification opportunities.

Although intensification areas can be created/identified by policy and land use designations, the identification of intensification sites that are available for development are more difficult to quantify. Kitchener, Waterloo and Cambridge are all assumed to be capable of achieving the intensification target of the Growth Plan.

The Growth Plan requires that the intensification target be achieved within the Region of Waterloo as a whole. Each lower-tier municipality has different circumstances and all lower tier municipalities with a built boundary may not be able to achieve the intensification target. For example, the Township of Woolwich has raised concern with respect to their ability to achieve the intensification target (the historic rate of intensification in Elmira is approximately 10%). The Growth Plan acknowledges this issue. Policy 5.4.2.2 of the Growth Plan provides that the Region of Waterloo, will:

"identify intensification targets for lower-tier municipalities, to achieve the intensification target and density targets for urban growth centres where applicable.

identify density targets for the designated greenfield area of the lower-tier municipalities, to achieve the density targets for designated greenfield areas."

Analyzing and identifying lower-tier intensification potential/inventory assists in confirming the nature of housing supply as input to the preparation of a land budget.

Existing and/or proposed City planning policies generally speak to creating stable neighbourhood enclaves (areas internal to neighbourhoods) with change directed to the periphery which are typically defined by corridors. The cities of Kitchener, Waterloo and Cambridge have or are evolving to an urban structure/hierarchy based on nodes and corridors.
The lower-tier municipalities have or are adopting a targeted intensification strategy in keeping with the focus areas identified by the Growth Plan. Figure 6 of this report identifies the targeted intensification areas.

The likely nature of residential development within the built boundary considers reports prepared by or on behalf of the lower tier municipalities; planning policies (existing/proposed); locational context; zoning; demolition activity; servicing policies; field reconnaissance, building permit information and vacant lot and draft approved inventory (among other considerations).

Table 6 summarizes Residential Building Permits issued within the Built Boundary between June 16, 2006 and June 30, 2011. The summary includes building permits issued for student housing.

<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>Single/Semi</th>
<th>%</th>
<th>Townhouse/ Multi</th>
<th>%</th>
<th>Apartment/ Other</th>
<th>%</th>
<th>TOTAL</th>
</tr>
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<tr>
<td>Waterloo</td>
<td>252</td>
<td>8.09%</td>
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<td>1.57%</td>
<td>2,814</td>
<td>90.34%</td>
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<td>26.93%</td>
<td>1,542</td>
<td>52.13%</td>
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<td>14.23%</td>
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<td>7.69%</td>
<td>1,026</td>
<td>78.08%</td>
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<td>85.14%</td>
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<td>8.03%</td>
<td>17</td>
<td>6.83%</td>
<td>249</td>
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<td>61</td>
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<td>0.00%</td>
<td>7</td>
<td>10.29%</td>
<td>8</td>
</tr>
<tr>
<td>Wilmot</td>
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<td>4.55%</td>
<td>33</td>
<td>18.75%</td>
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<td>28</td>
<td>77.78%</td>
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<td>0.00%</td>
<td>8</td>
<td>22.22%</td>
<td>36</td>
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</table>

**TOTAL RESIDENTIAL PERMITS**

1,494 | 18.87% | 975 | 12.32% | 5,447 | 68.81% | 7,916

Note:
1. Percentages may not add due to rounding
2. Unit totals include permits issued for student housing
3. Unit totals for Built Boundary include units issued in undesignated settlement areas (with the exception of Breslau) as follows:
   a. Woolwich – 55 S/5, 0 T/D, 0 A/O
   b. Wellesley – 23 S/5, 0 T/D, 1 A/O
   c. Wilmot – 13 S/5, 0 T/D, 0 A/O
   d. North Dumfries – 11 S/5, 0 T/D, 0 A/O

There are some vacant units in registered and draft approved plans located within the Built Boundary (Table 7). There are a limited number of single/semi and townhouse units within registered and draft approved plans. The absorption of this inventory is anticipated to occur by 2031 or sooner. The balance of residential development within the built boundary will (for the most part) be apartments and to a lesser extent - townhouses. Townhouses are more likely to occur through the development/re-development of site specific intensification opportunities.
Table 7
Summary of Vacant Registered and Draft Plan Inventory within Built Boundary (Spring 2011)

<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>PLAN TYPE</th>
<th>Single/Semi</th>
<th>Townhouse/ Multi</th>
<th>Apartment/ Other</th>
<th>TOTAL</th>
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<td>Waterloo</td>
<td>REGISTERED (UNBUILT)</td>
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<td>88</td>
<td>586</td>
<td>693</td>
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<td><strong>286</strong></td>
<td><strong>935</strong></td>
<td><strong>1,450</strong></td>
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<td><strong>1</strong></td>
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<tr>
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<td><strong>SUB-TOTAL NORTH DUMFRIES</strong></td>
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<td><strong>0</strong></td>
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<td><strong>TOTAL - REGION OF WATERLOO</strong></td>
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<td><strong>575</strong></td>
<td><strong>2,774</strong></td>
<td><strong>3,741</strong></td>
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</table>

The majority of intensification units are anticipated to occur within the City Urban Areas. This opinion takes a number of considerations into account such as:

- The overall size of the built boundary associated with the City Urban Areas.
- Existing/planned transit.
- The size and number of intensification areas and site specific intensification opportunities.
- Density targets associated with the urban growth centres.
- Urban structure/Urban form considerations.
- Contextual considerations.

The City of Cambridge has a number of potential apartment and townhouse opportunities with the majority of the potential opportunities (88%) falling into the apartment category. Residential intensification opportunities in Kitchener and Waterloo fall primarily within the apartment category although there are site specific opportunities for townhouses such as the Adam Street (Kitchener) proposal.

Once draft approved/registered inventory is absorbed, approximately 90-92% of intensification opportunities are assumed to be apartments and approximately 8% of intensification opportunities are assumed to be townhouses (street fronting and cluster). Relatively few new single detached and semi detached units are
anticipated to be developed. New single detached and semi detached units construction are not likely to represent additional inventory given conversions as well as demolitions which have occurred historically and that are anticipated to occur in order to accommodate intensification.
Appendix A

Summary List of Lands Not Designated for Development
### Lands Not Designated for Development

- Floodplains (one zone)
- Existing Cemeteries
- Boundary Roads
- Provincial Highways/Interchanges (Existing or EA approved)
- Major gas mains
- HEPC Corridors and hydro sub-stations
- Wellfields/Major Watermains/Water Tower Sites
- Rail lines
- Lands within Settlement Areas Not Intended for Development within the planning horizon of the approved ROPP
- Settlement Expansions proposed by the Adopted ROP
Appendix B

Employment Density Inputs
## NON-RESIDENTIAL/EMPLOYMENT DENSITY CALCULATIONS BY EMPLOYMENT CATEGORY

### Excluding Settlement Area Expansions proposed by the adopted ROP

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cambridge Headquarters</td>
<td>Cambridge</td>
<td>29</td>
<td>37.05</td>
<td>2,394</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
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<tr>
<td>2</td>
<td>South End</td>
<td>Cambridge</td>
<td>25</td>
<td>37.05</td>
<td>908</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
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<td>3</td>
<td>Cambridge Employment Land</td>
<td>Cambridge</td>
<td>42</td>
<td>38.79</td>
<td>2,156</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Downtown</td>
<td>Cambridge</td>
<td>79</td>
<td>26.61</td>
<td>2,158</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<tr>
<td>5</td>
<td>Cambridge Office</td>
<td>Cambridge</td>
<td>144</td>
<td>20.04</td>
<td>725</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<tr>
<td>6</td>
<td>Roslindale</td>
<td>Roslindale</td>
<td>1,068</td>
<td>7.67</td>
<td>12,815</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<tr>
<td>7</td>
<td>Chestnut Hill</td>
<td>Chestnut Hill</td>
<td>83</td>
<td>141.37</td>
<td>6,585</td>
<td>Employment Land</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<td>8</td>
<td>Roslindale</td>
<td>Roslindale</td>
<td>50</td>
<td>6.66</td>
<td>667</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<tr>
<td>9</td>
<td>South End</td>
<td>Cambridge</td>
<td>85</td>
<td>38.79</td>
<td>2,156</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
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<tr>
<td>10</td>
<td>The Heights</td>
<td>The Heights</td>
<td>85.2</td>
<td>40.81</td>
<td>9,196</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
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<tr>
<td>11</td>
<td>NRC - H2O</td>
<td>Natick</td>
<td>1,068</td>
<td>7.67</td>
<td>2,673</td>
<td>Major Institutional/Technology Park/Office</td>
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<tr>
<td>12</td>
<td>South End</td>
<td>Cambridge</td>
<td>396</td>
<td>26.01</td>
<td>5,415</td>
<td>Major Institutional/Technology Park/Office</td>
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<tr>
<td>13</td>
<td>City of Waterbury</td>
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<td>190</td>
<td>7.62</td>
<td>1,525</td>
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<td>14</td>
<td>Rural Core</td>
<td>Rural Core</td>
<td>123</td>
<td>20.04</td>
<td>2,456</td>
<td>Major Institutional/Technology Park/Office</td>
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<tr>
<td>15</td>
<td>University of Waterloo</td>
<td>Waterloo</td>
<td>225</td>
<td>85.09</td>
<td>225</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>University of Waterloo</td>
<td>Waterloo</td>
<td>225</td>
<td>85.09</td>
<td>225</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>City of Waterbury</td>
<td>Waterbury</td>
<td>72</td>
<td>36.43</td>
<td>2,122</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>City of Waterbury</td>
<td>Waterbury</td>
<td>80</td>
<td>25.09</td>
<td>640</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
<td></td>
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<tr>
<td>19</td>
<td>West End</td>
<td>West End</td>
<td>82</td>
<td>79.4</td>
<td>6,176</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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</tr>
<tr>
<td>20</td>
<td>Mercedes-Benz</td>
<td>Wolfsburg</td>
<td>1,068</td>
<td>7.67</td>
<td>11,221</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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<tr>
<td>21</td>
<td>Woodstock</td>
<td>Woodstock</td>
<td>80</td>
<td>25.09</td>
<td>640</td>
<td>Major Institutional/Technology Park/Office</td>
<td>Planning and Economic Impact Study prepared by SMSI.</td>
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</tr>
</tbody>
</table>

### Average Density [jobs/acre]

<table>
<thead>
<tr>
<th>Suburb</th>
<th>Average Density [jobs/acre]</th>
<th>Suburb/Total</th>
<th>1,068</th>
<th>88,061</th>
</tr>
</thead>
</table>

* Includes land in front of high school (D-2)

** A dominant employment adjustment has been made for employment land (east Cambridge) to recognize this has a number of overlapping contracts affecting development (D-3)

*** Communication with Waterloo Staff confirms the number of employees has been used to be conservative (D-12)

**** A downward adjustment has been made for employment land north of Waterbury to reflect the significant features designated in the Town of Waterbury Official Plan (D-21)

***** A downward adjustment has been made for the Town of Wolfsburg to reflect the significant features designated in the Town of Wolfsburg Official Plan (D-21)

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* Population-related employment and land areas considered as part of residential density calculations.
Appendix C

Identification of Lands to be Considered for Deletion from Township Urban Areas
Appendix C - Figure 1

MHBC Land Inventory and Density Analysis

Deletions from the Township Urban Area - Elmira

Settlement of Elmira
Township of Woolwich
Region of Waterloo
Appendix C - Figure 2

MHBC Land Inventory and Density Analysis

Deletions from the Township Urban Area - Baden

Settlement of Baden
Township of Wilmot
Region of Waterloo

**LEGEND**
- **Proposed Area of Deletion** (a25.85 ha)
- **Built Boundary**
- **Designated Greenfield Area**
- **Urban Area Boundary** (as per adopted ROPP)

**DATE:** April 2012

**SCALE:** 1:20,000
Appendix C - Figure 3

MHBC Land Inventory and Density Analysis

Deletions from the Township Urban Area - Ayr

Village of Ayr
Township of North Dumfries
Region of Waterloo

LEGEND
- Proposed Area of Deletion (433.86 ha)
- Built Boundary
- Designated Greenfield Area
- Urban Area Boundary (as per adopted RCPF)
- Municipal Boundary

DATE: April 2012

SCALE: 1:20,000

Planned Urban Design & Landscape Architecture
Appendix C - Figure 4

MHBC Land Inventory and Density Analysis

Deletions from the Township Urban Area - Breslau

Village of Breslau
Township of Woolwich
Region of Waterloo

LEGEND

Proposed Area of Deletion (430.5 ha)
Built Boundary
Designated Greenfield Area
Urban Area Boundary (as per adopted ROPP)
Municipal Boundary

DATE: April 2012
SCALE: 1:20,000

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
Appendix D

Identification of Lands Designated but Not Likely Available for Development by 2031
<table>
<thead>
<tr>
<th>Location</th>
<th>Approximate Net Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. East Cambridge</td>
<td>56 hectares ±</td>
</tr>
<tr>
<td>ii. Expansion of the Township Urban Area to include Eldale</td>
<td>13.78 hectares ±</td>
</tr>
</tbody>
</table>
Appendix D - Figure 1

MHBC Land Inventory and Density Analysis

Cambridge East Lands

LEGEND

- Cambridge East Lands
- Built Boundary
- Designated Greenfield Area
- Urban Area Boundary (as per adopted RCPP)
- Municipal Boundary

City of Cambridge
Region of Waterloo

DATE: April 2012
SCALE: 1:10,000

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
Appendix D - Figure 2

MHBC Land Inventory and Density Analysis

Eldale

Settlement of Elmira
Township of Woolwich
Region of Waterloo
Attachment E

Experiences to Date in Meeting the ROP Intensification and Density Targets in the Region of Waterloo

The following is a summary of the key policy directions contained in the Council-adopted ROP and the corresponding experiences to date in implementation of these requirements.

45 Percent Intensification Target

PROPOSED POLICY: ROP Policy 2.C.2 requires that by the year 2015 and every year thereafter, a minimum of 45 percent for all new residential development within the Region will occur within the built-up area.

EXPERIENCE TO DATE: For the first five and a half years of the planning period running from July 1, 2006 through December 31, 2011, 46.35 percent of all residential development building permits issued within the Region of Waterloo were for dwelling units within the built-up area.

Urban Area Designated Greenfield Density of 55 (residents and jobs per hectare)

PROPOSED POLICY: ROP Policy 2.D.17 requires that areas serving primarily a residential function within Urban Areas (residential Designated Greenfield Area) will meet or exceed a minimum density of 55 residents and jobs combined per hectare on lands not subject to a plan of subdivision when the Growth Plan came into effect.

EXPERIENCES TO DATE: Although not impacted by ROP Policy 2.D.17, plans of subdivision submitted before the Growth Plan came into effect, which represent 37.11% of all Urban Area Designated Greenfield Area unconstrained by provincial environmental constraints, have risen from 47.53 residents and jobs combined per hectare (49.21 residents and jobs combined per hectare adjusted for undercount) on June 16, 2006, to 51.49 residents and jobs combined per hectare (53.31 residents and jobs combined per hectare adjusted for undercount).

Development applications submitted since the Growth Plan came into effect (including plans of subdivision to year end 2010 and the Rosenberg Secondary Plan) represent 30.54% of all Urban Area Designated Greenfield Area unconstrained by provincial environmental constraints and have a combined density of 62.01 residents and jobs combined per hectare (64.17 residents and jobs combined per hectare adjusted for undercount).

Township Urban Area Density of 45 (residents and jobs per hectare)

PROPOSED POLICY: ROP Policy 2.E.6 requires that areas serving primarily a residential function within Township Urban Areas (residential Designated Greenfield Area) will meet or exceed a minimum density of 45 residents and jobs combined per hectare on lands not subject to a plan of subdivision when the Growth Plan came into effect.

EXPERIENCES TO DATE: Although not impacted by ROP Policy 2.E.6, plans of subdivision submitted before the Growth Plan came into effect, which represent 26.76% of all Township Urban Area Designated Greenfield Area unconstrained by provincial environmental constraints, have risen from 41.45 residents and jobs combined per hectare (42.91 residents and jobs combined per hectare adjusted for undercount) on June 16, 2006, to 45.75 residents and jobs combined per hectare (47.37 residents and jobs combined per hectare adjusted for undercount).
Plans of subdivision submitted since the *Growth Plan* came into effect represent 17.11% of all Township Urban Area Designated Greenfield Area unconstrained by provincial environmental constraints and have a density of 49.75 residents and jobs combined per hectare (51.51 residents and jobs combined per hectare adjusted for undercount).