

Canadian Board of Examiners for Professional Surveyors

Core Syllabus Item

C 10: LAND USE PLANNING AND THE ECONOMICS OF LAND DEVELOPMENT

Study Guide:

1. With reference to:

Barlowe, R. [1986]. *Land Resource Economics: the Economics of Real Estate*. 4th, Prentice-Hall, ISBN 0-13-522541-8

Q1.1. Generally, there are four categories of land use: commercial and industrial, residential, cropland and arable pasture, forest and grazing. By showing land value against use-capacity, illustrate how they may be regarded as the highest and best use.

See Chapter 1

Q1.2. The post-war baby boom has influenced the demand for land resources. Explain how and whether that demand is now any different than that predicted by Barlowe. Explain its current consequences.

See Chapter 4

Q1.3. Explain how the law of diminishing returns could influence the decision to develop real property.

See Chapter 5

Q1.4. Explain the value product and cost curve approaches to input-output productivity analysis and their suitability in deciding to develop real property.

See Chapter 5

Q1.5. Explain the factors that must be considered in every resource development project.

See Chapter 7

Q1.6. Explain how the cost-benefit ratio is considered in determining the economic viability of a development. Explain whether other factors must be considered.

See Chapter 7

Q1.7. Considering the current trend toward sustainability, explain the considerations for long-term management and conservation of land resources.

See Chapter 8

Q1.8. Explain the location factors that would influence: residential development, commercial development, industrial development.

See Chapter 9

Q1.9. Compare Barlowe's perspective on land use planning with that of Hodge & Gordon [2020], two decades later and more contemporary.

See Chapter 17

2. With reference to:

BLGDG Ltd. and Associates [1996]. *The Integrated Community: A Study of Alternative Land Development Standards*. report to Central Mortgage and Housing Corporation. no. PE 0207, 106 pp

Q2.1. This report promotes what might now be termed an ecological approach to land development such that the various parts (nodes, linear features, edges, etc.) of a community each perform a certain function and that there should be a transition from one (sub)urban form to another. Summarize how this paper suggests that this should be undertaken.

3. With reference to:

Condon, P. M., J. Proft, J. Teed, and S. Muir [2002]. *Sustainable Urban Landscapes: Site Design Manual for BC Communities*, University of British Columbia, Vancouver. .pdf, 153 pp

Q3.1. Explain how the Charrette approach to planning can create a more sustainable new or renewed community and how a land surveyor might be involved.

See Parts One and Two

Q3.2. With reference to one of the case studies, explain how the six "overarching" principles [capitalize on the site, connect the flows, layer the systems, create a centre, employ an economy of means, make it home] have been applied and how a land surveyor might be involved.

See Part Three

4. With reference to:

Condon, P.M., J. Teed, S. Muir, and C. Midgley [2002]. *Sustainable Urban Landscapes: Neighbourhood Pattern Typology*, University of British Columbia, Vancouver. .pdf 40 pp

Q4.1. Briefly explain the various neighbourhood patterns discussed in the text outlining the benefits and / or limitations of each.

5. With reference to:

Hodge, G., D.L.A. Gordon, and P. Shaw [2020]. *Planning Canadian Communities*. 7th, Nelson Canada, ISBN-13: 978-0176705497

Q5.1. Briefly explain the steps in the development of land into a residential subdivision and the role of the land surveyor in that process from the time that the land is sold to the developer until houses are occupied by the owners.

Q5.2. Explain how a municipal land use plan affects the development of land for: commercial use, for industrial use, for residential use.

What must happen if the proposed use does not conform to the use designated by the municipal plan?

Q5.3. The essential planning debate is not about the need for planning, but how planning should be done. Given this point-of-view, discuss the factors that influence and define land use planning.

See Chapter 1

- Q5.4. Discuss the numerous themes that have driven the development of land use planning throughout history and that continue to play a fundamental role in Land Use Planning

See Chapter 2

- Q5.5. Briefly describe the development of community planning in Canada and explain how that development would have affected the subdivision of land. Your answer can focus on a particular region and should deal from when land was granted by the Crown until the present.

See Chapters 3-5

- Q5.6. Describe, and give examples of, the various components that are generally used to classify land use.

See Chapter 6

- Q5.7. When considering land use and zoning, one typically focuses on different aspects of use at different spatial scales. Discuss the primary concerns that are the focus of planning at the parcel level, at the community level, and at the regional level.

See Chapter 6

- Q5.8. Transect planning takes an ecological approach to land use. Discuss the philosophy underpinning transect planning.

See Chapter 6

- Q5.9. Discuss the various principles that should be considered when developing a land use plan.

See Chapter 6

- Q5.10. Discuss how you might develop a community plan to ensure that it incorporates the physical, social, economic, and environmental perspectives of land use.

See Chapter 6

- Q5.11. Many provinces define a hierarchy of plans within their planning legislation that define the general types of plans necessary for land development. Discuss the significance and purpose of the different types of plans that you could expect to find in a land use planning hierarchy of plans.

See Chapter 7

- Q5.12. The Rational-Comprehensive Planning process [Robinson (1972), as referenced by Hodge & Gordon] has been adopted widely across Canada. Outline and discuss the five general steps of this planning process.

See Chapter 7

- Q5.13. Explain what principles should be considered when undertaking planning in an Aboriginal context.

See Chapter 7

- Q5.14. With some provincial or territorial variation, there are steps through which a municipality creates a plan for the use of land within its jurisdiction. Explain these steps and how a land surveyor might be either involved or affected by them.

See Chapter 8

Q5.15. Explain how regional planning differs from municipal planning.

See Chapter 9

Q5.16. Planning in small communities not only focus' on land use and its regulation, but historically has also been concerned with issues relating to resource management, the aging population, population decline and the industrialization of agriculture. How might these factors affect the way that Land Surveyors interact with these communities?

See Chapter 10

Q5.17. Describe the general process followed when developing municipal plans. As plans move from the more general to the more site-specific, how might the process change with respect to involvement of the public?

See Chapter 11

Q5.18. Land Use Planning creates a relationship between planners, politicians, developers and community. Summarize these relationships outlining the Land Surveyors role in each of them, if any, and discuss the relevance of these roles to Land Use Planning?

See Chapter 12

Q5.19. Discuss the various processes that a subdivision application must / may pass through prior to the commencement of construction. Who is, or should be involved in each stage?

See Chapter 13

Q5.20. How can communities develop more open, integrated planning processes that will allow them to meet new challenges that are yet to come? What role can a Land Surveyor play in this process?

See Chapter 14

Q5.21. Planning attempts to meet public desire such that the built environment offers an acceptable standard of living and address public concerns so as to improve the existing quality of life. What do you envisage, both as a Land Surveyor, and as a citizen, Land Use Planning will need to focus on in the future in order to achieve these goals?

See Chapter 15

6. With reference to:

Hunter Central Coast Regional Environmental Management Strategy (HCCREMS) [2007].
Water Smart Practice Notes

Q6.1. Practice Note 2 deals with site planning. Explain why it would be appropriate to understand the intent of all of the practice notes together.

7. With reference to:

Lynch, K. and G. Hack [1984]. *Site Planning*, 3rd, The MIT Press, ISBN 0-262-12106-9

Q7.1. Many cities in Canada were originally laid out in a rectangular grid, sometimes with a radial pattern. As they grew, the street pattern evolved. Explain why the original pattern did not persist.

See Chapter 7

- Q7.2. Commonly street widths were 1 chain in early subdivisions, such as Crown plats. Explain whether this has remained sufficient to the present day and, in addition to vehicular traffic, how utilities and pedestrian traffic can be accommodated.

See Chapter 7

- Q7.3. Many abandoned railway rights of way have been converted to walking trails. How else might they be utilized?

See Chapter 7

- Q7.4. In the design of a subdivision, explain how you would match existing street patterns and topography around the periphery of the area being developed. Illustrate with sketches.

See Chapter 7 and Appendix J

- Q7.5. As the design speed increases, explain how each of the following changes: minimum horizontal curve radius, minimum vertical curve length, minimum forward sight distance, and maximum grade.

See Chapter 7

- Q7.6. Explain whether vertical alignment must be considered along with horizontal alignment or whether they can be done separately.

See Chapter 7

- Q7.7. Explain how surveying is involved in the stages of real estate development, from initial land acquisition by the developer to the home owner occupying a new dwelling.

See Chapter 8 and Appendix B, C, E, G, K

- Q7.8. Explain how the topography of the area being developed will influence: surface drainage, street layout, underground drainage [storm and sanitary], and water supply.

See Chapter 8

- Q7.9. Explain how the floor area ratio varies with residence type and how it affects neighbourhood family density.

See Chapter 9

- Q7.10. Explain the consequences of lower family density.

See Chapter 9

- Q7.11. Explain how each of the following form of tenure affects revenue for the developer and dwelling type: fee simple, interest in common, home association, condominium, co-operative, leasehold.

See Chapter 9

- Q7.12. Explain the factors influencing the number of and location of parking spaces in a residential development.

See Chapter 9

- Q7.13. With the current trend toward sustainability, explain how the orientation of dwellings and consequently lot layout would be affected.

See Chapter 9

Q7.14. There are three distinct forms of two family housing: semi-detached, duplex, and rear-lot housing. Explain each and how it is accommodated in lot layout.

See Chapter 9

Q7.15. In a development by subdivision, the dwelling design and situation is sometimes done by persons other than those who designed the lot layout. Explain whether this is good or bad.

See Chapter 11

Q7.16. Explain how subdivision design must account for activities beyond the current development.

See Chapter 11

8. With reference to:

Municipal Program Development Branch [1999]. *Stormwater Management Guidelines for the Province of Alberta*, Alberta Environmental Protection. 196 pp [ch. 1 - 3].

Q8.1. When designing a subdivision what should be considered when developing a stormwater management plan?

9. With reference to:

Water Sensitive Urban Design in the Sydney Area (WSUD) [2003]. *Water Sensitive Practice Notes*

Q9.1. Practice Note 2 deals with site planning. Explain why it would be appropriate to understand the intent of all of the practice notes together.