



Corporate Report

NO: R244

COUNCIL DATE: NOVEMBER 19, 2007

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **November 16, 2007**

FROM: **General Manager, Engineering**

FILE: **6520-20(EC)/
4804-704**

SUBJECT: **Delegation to September 10, 2007 - Clayton Property Owners' Association re:
Development of the East Clayton Area and Servicing to Remaining Clayton Area**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report as information; and
2. Instruct staff to forward a copy of this report to the delegation representing the Clayton Property Owners' Association.

INTENT

The purpose of this report is to provide information to Council regarding the issues raised at the September 10, 2007, Council meeting by Ms. Delaney Paterson, who appeared before Council on behalf of the Clayton Property Owners' Association. The delegation requested that the plan area of the East Clayton North Extension Neighbourhood Concept Plan ("NCP") be expanded to the north to 76 Avenue, along 194 Street, to include the properties owned by the Association members.

Service Area Boundary

Properties owned by Ms. Dorscie Paterson and Ms. Delaney Paterson (7465 and 7473 – 194 Street) are located north of the East Clayton North Extension NCP boundaries. The boundaries of the NCP were established based on the area that could be serviced by gravity sewer systems from south of 72 Avenue in East Clayton. The area to the north of the NCP Extension slopes to the north and west and, therefore cannot be serviced by gravity sewers from the south. For more detail background, please refer to Appendix I.

Because the elevation of 72 Avenue at 194 Street is approximately 2.0 metres higher than the Paterson properties (i.e., the fall of the land is to the north), gravity sewer from the south cannot service their properties.

Their properties and the other properties to the north of the NCP area will ultimately be serviced by gravity sewer systems from the north, but such systems will require significant new investments in large diameter trunk sewer mains to the north and west of that area. This trunk sewer, known as the Cloverdale Interceptor (Clayton Interceptor), originates at the 68 Avenue pump station on 176 Street. This plan is consistent with proper engineering for the provision of sewer service to the area. The remaining Clayton area will be phased from west to east. Further NCP plans will be prepared for the remainder of the Clayton area as servicing for these areas becomes available. Extension of the Cloverdale Interceptor to the Clayton area, as described above, is not yet in the City's 10 year plan. For more detail, please refer to Appendix I.

Design of Sewers

The delegation raised the issue of the design of the sewer, namely its depth, slope and the population that could be serviced. The sewers in this area are designed by professional consultants to the design criteria that the City has established and used for the design of sewers for many years. Staff know of no reason why the sewers that have been constructed for this specific area will not function in a perfectly satisfactory manner.

CONCLUSION

Gravity sewer service cannot extend beyond the East Clayton North Extension NCP boundaries to service the Paterson properties because their land is too low to service from the south. Sound engineering criteria have been followed in planning the servicing for East Clayton. It is recommended that Council authorize staff to forward a copy of this report to the delegation representing the Clayton Property Owners' Association that appeared before Council on September 10, 2007.

Paul Ham, P.Eng.
General Manager, Engineering

PH/RL/brb:rdd
Attachment

Appendix I	Detail Background and Discussion relating to this Report
Appendix II	Land Use Plan – East Clayton North Extension
Appendix III	Map Showing the Area Topography and the Paterson Properties
Appendix IV	Clayton Neighbourhood Boundaries – 1999 Clayton General Land Use Plan
Appendix V	Map Showing the Cloverdale Interceptor (Clayton Interceptor)

DETAIL BACKGROUND and DISCUSSION**Delegation of September 10, 2007 - Clayton Property Owners' Association
Development of the East Clayton area and Servicing to Remaining Clayton****BACKGROUND**

On July 28, 2004, Council approved the Stage 1 Land Use Concept Plan for the East Clayton North Extension NCP, which is attached as Appendix II to this memo. Subsequently, on June 27, 2005, Council adopted the final Stage 2 Report for this NCP.

The East Clayton North Extension NCP area is located to the north of the East Clayton NCP area that was approved in March of 2003. The East Clayton NCP, when adopted, contained a notation for the lands immediately north of 72 Avenue which states:

"Development of this area as shown is subject to servicing being feasible from south of 72 Avenue with detailed survey and engineering design being done for each development parcel".

The East Clayton North Extension NCP area is defined by 72 Avenue to the south, 188 Street to the west and 196 Street/Surrey-Langley borders to the east. The northerly boundary follows the limit of the area that can be serviced by gravity from the engineering services to the south of 72 Avenue. The plan area is illustrated in Appendix II.

The East Clayton North Extension NCP area comprises approximately 43 hectares (106 acres) of land, that is currently designated Suburban in the Official Community Plan (OCP) and is designated Future Urban in the 1999 Clayton General Land Use Plan.

On July 26, 2004, before the approval of Stage 1 of the East Clayton North Extension NCP, Council-in-Committee received a delegation from Ms. Delaney Paterson, questioning the rationale used to establish the northerly limit of the NCP and asking that the lands north of 74 Avenue along 194 Street also be included in this NCP. The map in Appendix III shows the location of properties of both Ms. Dorscie Paterson and Ms. Delaney Paterson (7465 and 7473 – 194 Street) in the context of the East Clayton North Extension NCP.

The area to the north of 72 Avenue, including the Paterson properties, is currently designated Suburban in the OCP and Future Urban in the Clayton General Land Use Plan that was adopted by Council in 1999.

During the process of completing the Stage 2 component of the East Clayton North Extension NCP, staff reviewed the previous written submission from Ms. Paterson. Detailed topographic information and servicing studies were undertaken by engineering consultants on behalf of the City and were reviewed by Planning and Engineering staff to determine the northerly boundary for the East Clayton North Extension NCP, based on the area that was serviceable by gravity from south of 72 Avenue.

The Clayton Property Owners' Association, led by Ms. Delaney Paterson, made a similar delegation request in May 30, 2005 to Council-in-Committee. A similar staff report was subsequently prepared for Council and forwarded to the delegation.

DISCUSSION

Servicing Issues

The northerly boundary of the East Clayton North Extension NCP was established on the basis of detailed engineering analysis of the topography and the ability to provide gravity engineering services to the area from the existing and planned engineering services to the south of 72 Avenue. The map attached as Appendix III shows the topography of the area. The area beyond the plan area of the NCP slopes generally to the north and from east to west. The lands to the north of the Terasen Gas right-of-way, which is the northerly servicing boundary and consequently the NCP boundary to the west of 192 Street, slope to the north. The area to the east of 192 Street gently slopes to the west and north displaying almost flat topographic characteristics. A three-dimensional topographic model prepared by the engineering consultant revealed that the elevation of 72 Avenue at 194 Street is approximately 2.0 metres higher than the elevation of 194 Street at 74 Avenue, clearly demonstrating that north of 72 Avenue, the land is generally sloping to the north.

The key engineering criteria that formed the basis of the boundaries of the NCP area, and the determination of the area that could be serviced by gravity sewers from south of 72 Avenue, include:

- a maximum sewer depth of 5 metres is allowed from finished grade as per the City's established standards;
- a maximum fill depth of 1.2 metres is allowed to raise grades sufficiently to permit efficient servicing of the lots and/or to allow in-ground basements; and
- the minimum grade for servicing pipes required in accordance with the City's policies and good engineering practices.

Based on the above criteria and topographic analysis, it was determined that the area outside of the NCP area boundaries, including the Paterson properties, cannot be serviced by gravity from the engineering services south of 72 Avenue. It was neither practical nor reasonable to include in the NCP the properties outside of areas that could not be served by gravity engineering services. The properties to the north of the East Clayton North Extension NCP plan area will ultimately be serviced by gravity systems from the north, but such systems will require significant new investments in large diameter trunk sewer mains to the north and west of that area.

Servicing of the Clayton Areas Located Both North of 74 Avenue and West of 186 Street

Due to the topographic and servicing constraints, the area to the north of the northerly boundary of the East Clayton North Extension NCP cannot be serviced until a further NCP is prepared for that area. Appendix IV illustrates the proposed neighbourhood boundaries for the Clayton area. These boundaries were established on the basis of the anticipated availability of services for the various neighbourhoods, each being serviced in an efficient and cost-effective

manner by gravity. The development of the areas north and west of the East Clayton North Extension NCP will require the construction of a large diameter trunk sewer along the base of the slope from the Fraser Highway at approximately 72 Avenue to the northeast. This trunk sewer, known as the Cloverdale Interceptor (Clayton Interceptor), originates at the 68 Avenue pump station on 176 Street. The map attached as Appendix V illustrates the alignment of Cloverdale Interceptor. The remaining developable lands in the Clayton area will be serviced from west to east. Extension of the Cloverdale Interceptor to the Clayton area, as described above, is not yet in the City's 10 year plan.