

CITY OF BURNABY

FINANCE AND CIVIC DEVELOPMENT COMMITTEE

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**RE: BURNABY LAKE SPORTS COMPLEX - WEST FIELDS 4 & 5**

**RECOMMENDATION:**

1. **THAT** a copy of this report be sent to the Parks & Recreation Culture Commission for information purposes.

REPORT

The Finance and Civic Development Committee, at its Open meeting held on 2004 October 04, received and adopted a report to provide an update on the pre-loading and monitoring of fields 4 and 5.

Respectfully submitted,

Mayor Derek R. Corrigan  
Chair

Councillor Dan Johnston  
Vice Chair

Councillor Nick Volkow  
Member

COPY - CITY MANAGER  
- DEPUTY CITY MANAGER  
- CHIEF BUILDING INSPECTOR  
- DIRECTOR PLANNING & BUILDING  
- DIRECTOR FINANCE  
- DIRECTOR ENGINEERING  
- DIR. PARKS, REC. & CULT. SERV.  
- CITY SOLICITOR

**TO:** FINANCE & CIVIC DEVELOPMENT COMMITTEE 2004 September 23

**FROM:** MAJOR CIVIC BUILDING PROJECT  
COORDINATION COMMITTEE

**SUBJECT:** BURNABY LAKE SPORTS COMPLEX - WEST  
FIELDS 4 & 5

**PURPOSE:** To provide an update on the pre-loading and monitoring of fields 4 and 5.

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**Recommendation:**

1. **THAT** this report be received for information purposes.
2. **THAT** a copy of this report be sent to the Parks, Recreation & Culture Commission for information purposes.

**REPORT**

1.0 **Background:**

Staff was requested to explore the feasibility of developing additional synthetic turf play fields at the Burnaby Lake Sports Complex West. In this regard the consulting firm of Thurber Engineering was retained to undertake a detailed study of the sub-surface conditions and prepare a plan for pre-loading the proposed site of future fields 4 and 5. In the fall of 2002, a contract for pre-loading the site was awarded to CAP Ventures Ltd. This work was completed by mid-October 2002.

Following the completion of the pre-load placement, the consulting engineers began the process of monitoring the settlement gauges and other instruments to obtain data on the effect of the pre-load placed over the soft underlying peat soils. The gauges were read and recorded at approximately 3 month intervals up to the spring of 2004, at which time the engineers determined enough data had been gathered to predict a trend in the settlement rates

2.0 Summary:

Due to soft underlying soils, pre-loading was determined to be the most economical way to reduce the post construction settlement should synthetic turf fields be constructed. Since the pre-load was placed the existing ground has settled from 50 mm to 300 mm across the site. The final readings taken from the settlement gauges " show a marked decrease in the settlement rate with time, which is an indication that primary consolidation is nearly complete and that the settlement observed is secondary compression". The secondary compression cannot be eliminated entirely and will continue on ad infinitum at a decreasing rate over time due to the nature of the existing soils. This long term post construction settlement (secondary compression) is estimated to be less than 10 mm in 10 metres over the life of the synthetic turf. It is further recommended that the pre-load remain in place until the fields are developed in order to achieve the maximum benefit of the pre-load and to take advantage of the re-bounce when the pre-load material is removed.

3.0 Conclusion:

Based on the data gathered and the analysis by the consulting firm, it has been determined that the development of the synthetic turf fields is feasible without significant differential settlement of the base. The predicted future settlement of 10 mm is well within an acceptable tolerance for synthetic fields. Should the City decide to proceed with the development of Fields 4 and 5, staff will undertake the necessary steps to commence the planning and engineering design required.



W.C. SINCLAIR, CHAIR, MAJOR CIVIC BUILDING  
PROJECT COORDINATION COMMITTEE



J.S. BELHOUSE, DIRECTOR PLANNING & BUILDING



KATE FRIARS, DIRECTOR PARKS, RECREATION  
& CULTURAL SERVICES

JC/RP:mdw

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cc: City Manager  
Deputy City Manager  
Director Finance  
City Solicitor  
Chief Building Inspector  
City Clerk

