



# DEVELOPMENT IMPACT REPORT

## “RENWICK WAY” 45 MAIN STREET ACTON, MA

April 26, 2006

*Prepared for:*

Renwick S. Tweedy Jr.  
P.O. Box 1645  
Acton, MA 01720

**LANDTECH**  
Consultants, Inc.

*Civil Engineers • Land Surveyors • Project Management*  
484 Gorton Road, Unit #1 • Westford, Massachusetts 01886  
Tel: 978-692-6100 • Fax: 978-692-6666

**LANDTECH**  
**Consultants, Inc.**

*Civil Engineers • Land Surveyors • Project Management*

*484 Groton Road, Unit #1 • Westford, Massachusetts 01886*

*Tel: (978) 692-6100 • Fax: (978) 692-6668*

April 26, 2006

Mr. Roland Bartl, Town Planner  
Acton Planning Board  
472 Main Street  
Westford, MA 01720

REF: "Renwick Way" – Road Improvement Plan  
45 Main Street, Acton, MA

Dear Mr. Bartl:

Please find enclosed 6 full size copies and 15 reduced copies of a Road Improvement Plan entitled "Renwick Way" – Main Street – Acton, Massachusetts, along with supporting documentation for the above referenced project.

The project would include the upgrade of an existing private roadway to the Town of Acton standards and all grading and drainage affiliated with this upgrade. This roadway services the two proposed single-family houses as well as an existing house. The single-family units and existing house would be serviced by a twenty (20) foot wide private roadway, underground utilities and on-site sewage disposal systems.

We would ask that the Board schedule the appropriate hearing. Should you have any questions or require additional information prior to the hearing, please do not hesitate to contact our office.

Sincerely,

**LANDTECH CONSULTANTS, INC.**



Jeramie Vaine  
Project Engineer



Town of Acton  
 472 Main Street  
 Acton, MA 01720  
 Telephone (978) 264-9622  
 Fax (978) 264-9630

T-0312 P.02/12 F-085

John McMullen  
 Assistant Assessor

Locus: 45 Main St  
 Parcel ID: 12-10

Location	Parcel ID	Owner	Co-Owner	Mailing Address	City	ST	Zip
CONANT ST	H3.B-88-5	SONDAK DOUGLAS L		11 CONANT ST	ACTON	MA	01720
CONANT ST	H3.B-88-6	PAIKIN DAVID N	DEUTSCH LYNNE K	13 CONANT ST	ACTON	MA	01720
MAIN ST	12-8	VARINO DANIEL C	PAIKIN KATHERINE R	P.O. BOX 2427	ACTON	MA	01720
MAIN ST BEHIND	12-13	TWEEDY RENWICK S	MARIANNE	PO BOX 2845	ACTON	MA	01720
MAIN ST BESIDE	12-17	TWEEDY RENWICK S JR	KATE BAKER-TWEEDY	PO BOX 2846	ACTON	MA	01720
CONANT ST	12-18	FISKE PETER K	KATE BAKER-TWEEDY	15 CONANT ST	ACTON	MA	01720
			GROSOWSKY TINA				

owner of land sharing a common boundary or corner with the site of the proposed activity (100 feet) in any direction, including land located directly across a street, way, creek, river, stream, brook or canal. The names above are as they appear on the most recent applicable taxes.

*Kimberly D. Hoyt*  
 Kimberly D. Hoyt  
 Assisting Clerk  
 Assessor's Office  
 21-Apr-08

From: TOWN OF ACTON  
 04-28-08 10:58am

## FORM DIR

### DEVELOPMENT IMPACT REPORT

The Development Impact Report (DIR) is intended to serve as a guide to the applicant in formulating the development proposal, as well as a guide to the Planning Board in its evaluation of the proposed development in the context of existing conditions and planning efforts by the Town. The DIR should be prepared as early in the development process as possible, even if certain aspects are unknown at that time. It is recommended that the various aspects of the DIR, together with a conceptual development plan, are discussed with the Planning Department staff as soon as possible, prior to the filing of an application for approval of a preliminary plan.

The DIR seeks to raise the broad range of issues generally associated with development plans in a form and in a language that is understandable to a layperson. It assesses development impacts which could possibly be avoided or mitigated if recognized early in the development process. Other portions of the DIR request information which will help the Town plan ahead and ensure adequate services in the future. It is the hope of the Planning Board that the use of the DIR, along with early consultations with the Planning Department staff and the applicant's continuing cooperation throughout the development process, will foster a development of excellent quality and design sensitive to Acton's natural and historic heritage and other community concerns.

The DIR shall be filed with an application for approval of a preliminary and a definitive subdivision plan. The DIR shall clearly and methodically assess the relationship of the proposed development to the natural, physical, and social environment. In preparing the DIR, professionals of the respective fields shall be consulted and a systematic, interdisciplinary approach shall be utilized which will ensure the integrated use of the natural and social sciences and the environmental design arts in planning, designing and engineering of the proposed project.

## DEVELOPMENT IMPACT REPORT

Please type or print information in blanks below.

1. Name of Proposed Subdivision RENWICK WAY
2. Location 45 Main Street; Acton, MA
3. Name of Applicant(s) RENWICK S. Tweedy JR.
4. Brief Description of the Proposed Project The project would include the up grade of an existing private roadway, the construction of 2 single family homes as well as individual septic systems and associated utilities
5. Name of Individual Preparing this DIR Jeremie Vaine  
 Address 484 Groton Road; Unit #1 Business Phone (978) 692-6100  
Westford, MA 01886
6. Professional Credentials Design Engineer: Under the supervision of Mathew A. Waterman; Professional Engineer in the Commonwealth of Massachusetts.

### A. Site Description

7. Present permitted and actual land uses by percentage of the site.

Uses	Percentage
Industrial	
Commercial	
Residential	100%
Forest	
Agricultural	
Other (specify)	

8. Total acreage on the site: 3.45 acres.

Approximate Acreage	At Present	After Completion
Meadow or Brushland (non agriculture)	-	-
Forested	1.76	0.46
Agricultural (includes orchards, cropland, pasture)	-	-
Wetland	0.92	0.92
Water Surface Area	-	-
Flood Plain	-	-
Unvegetated (rock, earth, or fill)	0.49	-
Roads, buildings and other impervious surfaces	0.28	0.48
Other (indicate type): <u>Grass</u>	-	1.57

9. List the zoning districts in which the site is located and indicate the percentage of the site in each district. *Note: be sure to include overlay zoning districts.*

District	Percentage
Residential	100%

10. Predominant soil type(s) on the site: Merrimac - Urban Land Complex; Montauk Sandy Loam; Swansea Muck; Paxton Sandy Loam. ALL of the soils are in the Hydrologic Group C  
*Except Swansea / muck, which is JD*  
 Soil drainage (Use the US Soil Conservation Service's definition)

Soil Type	% of the Site
Well drained	
Moderately well drained	
Poorly drained	100%

11. Are there bedrock outcroppings on the site?  yes  no

12. Approximate percentage of proposed site with slopes between:

Slope	% of the Site
0 - 10%	85%
10 - 15%	
greater than 15%	15%

13. In which of the Groundwater Protection Districts in the site located? How close is the site to a public well?

Zone(s) 4 Proximity to a public well: 2700 feet

14. Does the project site contain any species of plant or animal life that is identified as rare or endangered? (Consult with the Massachusetts National Heritage Program and the Acton Natural Resources Director).

yes  no

If yes, specify: \_\_\_\_\_

15. Are there any unusual or unique features on the site such as trees larger than 30 inches D.B.H., bogs, kettle ponds, eskers, drumlins, quarries, distinctive rock formation or granite bridges?

yes  no

If yes, specify: \_\_\_\_\_

16. Are there any established foot paths running through the site or railroad right of ways?  
 yes  no

If yes, specify: \_\_\_\_\_  
\_\_\_\_\_

17. Is the site presently used by the community or neighborhood as an open space or recreation area?  
 yes  no

Is the site adjacent to conservation land or a recreation area?  yes  no

If yes, specify: \_\_\_\_\_  
\_\_\_\_\_

18. Does the site include scenic views or will the proposed development cause any scenic vistas to be obstructed from view?  yes  no

If yes, specify: \_\_\_\_\_  
\_\_\_\_\_

19. Are there wetlands, lakes, ponds, streams, or rivers within or contiguous to the site?  
 yes  no

If yes, specify: On the Western side of the Site a Wetland is located. No work will be done inside the 50' Buffer for this Wetland

20. Is there any farmland or forest land on the site protected under Chapter 61A or 61B of the Massachusetts General Laws?  yes  no

If yes, specify: \_\_\_\_\_  
\_\_\_\_\_

21. Has the site ever been used for the disposal of hazardous waste? Has a 21E Study been conducted for the site?  yes  no

If yes, specify results: \_\_\_\_\_  
\_\_\_\_\_

22. Will the proposed activity require use and/or storage of hazardous materials, or generation of hazardous waste?  yes  no

If yes, specify \_\_\_\_\_  
\_\_\_\_\_

23. Does the project contain any buildings or sites of historic or archaeological significance? (Consult with the Acton Historic Commission or the Acton Historical Society.)  
 yes  no

If yes, please describe \_\_\_\_\_  
\_\_\_\_\_

24. Is the project contiguous to or does it contain a building in a local historic district or national register district?  
 yes  no

25. Is the project contiguous to any section of the Isaac Davis Trail?  
 yes  no

If yes, please describe \_\_\_\_\_

**B. Circulation System**

26. What is the average weekday traffic and peak hour traffic volumes generated by the proposed subdivision?

Average weekday traffic		20.0
Average peak hour volumes	morning	1.52
Average peak hour volumes	evening	2.0

27. Existing street(s) providing access to proposed subdivision:

Name Main Street Town Classification Through/Collector Street

28. Existing intersection(s): list intersections located within 1000 feet of any access to the proposed development:

Name of ways Farely Lane and Main St.; Fletcher Ct. and Main St.; Sylvia St. and Main St. Pine St. and Main St.; Albertine Dr. and Main St.; High St. and Main St.

29. Location of existing sidewalks within 1000 feet of the proposed site?

On the western side of Main Street; Across Main Street from the site.

30. Location of proposed sidewalks and their connection to existing sidewalks:

N/A

31. Are there parcels of undeveloped land adjacent to the proposed site?  yes  no

Will access to these undeveloped parcels be provided within the proposed site?

yes  no

If yes, please describe \_\_\_\_\_

If no, please explain why The project is to upgrade and existing right of way but not limited to providing access for the two proposed dwellings and one existing dwelling.

**C. Utilities and Municipal Services**

32. If dwelling units are to be constructed, what is the total number of bedrooms proposed?  
3

33. If the proposed use of the site is nonresidential what will the site be specifically used for and how many feet of Gross floor area will be constructed? \_\_\_\_\_

34. Storm Drainage \_\_\_\_\_

- a. Describe nature, location and surface water body receiving current surface water of the site:  
The Wetland located on the Site discharges down gradient to Pratt's Brook, which is located approximately 1 mile from the site.
- b. Describe the proposed storm drainage system and how it will be altered by the proposed development: Currently there is no on site drainage. The new Stormwater management System will reduce flow to the Wetlands, Main Street and the abutting parcels.
- c. Will a NPDS Permit be required?       yes       no
35. In the event of fire, estimate the response time of the fire department (consult with Fire Dept.)  
Approximately 6 minutes from Central St. Station; 2 minutes from School St Station
36. Schools (if residential)
- a. Projected number of new school age children: 2.2 per Household
- b. Distance to nearest school: 2 miles

#### **E. Measures to Mitigate Impacts**

Attach brief descriptions of the measures that will be taken to:

37. Prevent surface water contamination.
38. Prevent groundwater contamination.
39. Maximize groundwater recharge.
40. Prevent erosion and sedimentation.
41. Maintain slope stability.
42. Design the project to conserve energy.
43. Preserve wildlife habitat.
44. Preserve wetlands.
45. Ensure compatibility with the surrounding land uses.
46. Control peak runoff from the site so that the post-development rate of runoff will be no greater than the predevelopment rate of runoff for the 10-year storm event.
47. Preserve historically significant structure and features on the site.
48. To mitigate the impact of the traffic generated by the development.

Please use layman's terms where possible while still being accurate and comprehensive. Where appropriate, graphics shall be used. List sources of data, reference materials, and methodology used to determine all conclusions. Use additional sheets as necessary.

**Development Impact Report** **LANDTECH** *Consultants, Inc.*  
(Supplemental Information)  
**Renwick Way**

**E. Measures to Mitigate Impacts**

37. Prevent Surface Water Contamination: All drainage for the proposed subdivision would be collected in a closed drainage system which would include catch basins equipped with deep sumps to collect sediment and oil/gas hoods to collect floating contaminants.
38. Prevent Groundwater Contamination: The site would be serviced with individual septic systems which will be designed in accordance with Title V and the Town of Acton's Board of Health rules and regulations. One existing homes presently being served by individual septic system will be upgraded according to the standards set by Title V and the Town of Acton's by laws. The stormwater management system has been designed to retain the first half-inch of runoff from impervious areas in a sediment forebay located in the detention basin.
39. Maximize Groundwater Recharge: Stormwater runoff collected in the stormwater management system would be treated in accordance with the DEP Stormwater Management Policy and the requirements of the Town of Acton and then allowed to infiltrate into the underlying aquifer and to the wetlands.
40. Prevent Erosion and Sedimentation: An Erosion and Sediment Control Plan has been prepared for the development. The erosion control measures would include:
  - Hay Bale check dams along the roadway prior to paving to prevent erosion;
  - A stone construction entrance to control sediment transport from construction vehicles;
  - Filter fabric at all catch basin grates to prevent excessive sedimentation of the existing drainage system in High Street and the proposed retention and infiltration basins;
  - Hay bale check dams at drainage discharge points.
41. Maintain Slope Stability: No areas of severe slopes are present on the site. Therefore, slope stability problems are not anticipated.
42. Design the Project to Conserve Energy: By proposing the project in the present form, fewer resources would be required to construct the infrastructure as well as less maintenance upon completion of construction.
43. Preserve Wildlife Habitat: The development as proposed would preserve approximately 1.89 acres of land, 0.92 acres of wetland currently owned by Renwick S. Tweedy, thereby protecting a large area of existing natural habitat.
44. Preserve Wetlands: No construction is proposed within 50 feet of any wetland area that has been identified as of the date of submittal.
45. Ensure Compatibility with the Surrounding Land Uses: Adjacent land areas have been developed as single family residential homes on lot sizes similar to this proposal. The undisturbed land will help to provide maximum potential protection to existing aquifer recharge areas as well as the stormwater management systems that have been implemented.
46. Control peak runoff from the site so that the post development rate of runoff will be no greater than the predevelopment rate for the 10-year storm event: The proposed drainage would be controlled utilizing detention. The design incorporates measures to assure that the post-development rate of runoff does not exceed the pre-development rates of runoff for a 10-year frequency storm.
47. Preserve Historically Significant Sand Features on the Site: At the time of submittal, no historically significant features are known to exist on the site.
48. To Mitigate the Impact of Traffic Generated by the Development: Main Street is currently a high volume through/collector street. The addition of a potential 20 car trips per day (10 trips per new household) is not anticipated to have a substantial impact. The stopping sight distance approaching Renwick Way from either direction would be at least 300 feet.

