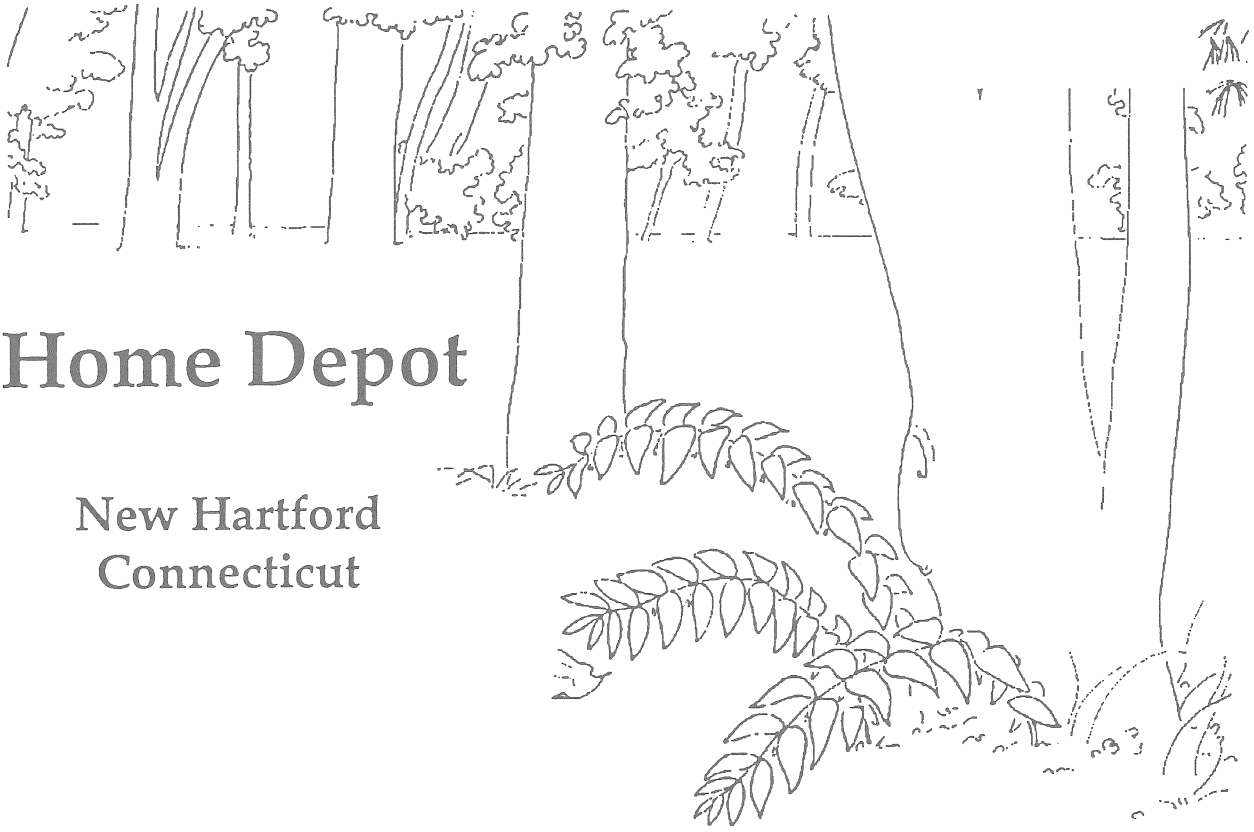

Home Depot

New Hartford
Connecticut

KING'S MARK ENVIRONMENTAL REVIEW TEAM REPORT

King's Mark Resource Conservation & Development Area, Inc.

Home Depot

New Hartford, Connecticut

Environmental Review Team Report

Prepared by the
King's Mark Environmental Review Team
of the
King's Mark
Resource Conservation and Development Area, Inc.

for the
Inland Wetlands and Watercourses Commission
New Hartford, Connecticut

October, 1997

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Acknowledgments

This report is an outgrowth of a request from the New Hartford Inland Wetlands and Watercourses Commission to the Litchfield County Soil and Water Conservation District (SWCD). The SWCD referred this request to the King's Mark Resource Conservation and Development Area (RC&D) Executive Council for their consideration and approval. The request was approved and the measure reviewed by the King's Mark Environmental Review Team (ERT).

The King's Mark Environmental Review Team Coordinator, Elaine Sych, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this report.

The field review took place on Friday, October 10, 1997.

Christopher Fray	Technical Director Litchfield County Soil and Water Conservation District (860) 626-8258
Doug Hoskins	Environmental Analyst III DEP - Inland Water Resources Division (860) 424-3903
Julie Shane Kiritsis	Stormwater Permit Engineer DEP - Stormwater Management (860) 424-3914

I would also like to thank Paul Volovski, Wetlands Officer, Karl Milsey of New Hartford, Vincent Sabatini, attorney for the applicant, Alan Borghesi, owner, Leonard Jackson, project engineer, and Michael Klein and Rob Good, project consultants, for their cooperation and assistance during this environmental review.

Prior to the review day, each Team member received a summary of the proposed project with location and soils maps, plans and other technical information. During the

field review Team members were given additional plans and information. Following the review, reports from each Team member were submitted to the ERT coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site plans or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project - all final decisions rest with the Town and landowner. This report identifies the existing resource base and evaluates its significance to the proposed development, and also suggests considerations that should be of concern to the Town and applicant. The results of this Team action are oriented toward the development of better environmental quality and the long term economics of land use.

The King's Mark RC&D Executive Council hopes you will find this report of value and assistance in reviewing and making your decision on this proposed commercial development.

If you require additional information please contact:

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Introduction

Introduction

The New Hartford Inland Wetlands and Watercourses Commission (IWWC) has requested assistance from the King's Mark Environmental Review Team in conducting an environmental review of the proposed Home Depot project.

The 21.48 acre site is located at the intersection of Route 202 and Harrison Road on the New Hartford-Torrington town line. The site contains 8.6 acres of wetlands in the easterly portion of the site. A 116,000 square foot Home Depot is proposed with parking for 640 vehicles. The site is within a Planned Business District which allows retail buildings as a permitted use by Special Exception.

Objectives of the ERT Study

The Environmental Review Team has been asked to assist the IWWC with a review of the proposal with specific regard to wetland assessment and impacts, stormwater management, water quality and erosion and sediment control.

The ERT Process

Through the efforts of the Inland Wetlands and Watercourses Commission this environmental review and report was prepared for the Town of New Hartford.

This report provides an information base and a series of recommendations and guidelines which cover the topics requested by the Town. Team members were able to review maps, plans and supporting documentation provided by the applicant.

The review process consisted of four phases:

1. Inventory of the site's natural resources;
2. Assessment of these resources;
3. Identification of resource areas and review of plans; and
4. Presentation of management and land use guidelines.

The data collection phase involved both literature and field research. The field review was conducted on October 10, 1997. The emphasis of the field review was on the exchange of ideas, concerns and recommendations. Being on site allowed Team members to verify information and to identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. Individual Team members then prepared and submitted their reports to the ERT coordinator for compilation into this final ERT report.

Wetland Resources

Materials Reviewed

- "Site Plans Prepared for / The Home Depot / Town of New Hartford / Litchfield County, Connecticut", by Leonard Jackson Associates, dated 8/14/97, last revised 10/17/97.
- Report entitled "Wetland Inventory, Evaluation, and Impact Assessment", by Environmental Planning Services, dated 3/22/97.
- Correspondence from R. Slayback to L. Jackson dated 8/12/97.

Included in this section are observations of the wetland resources, the impacts that the proposed activities may have on those resources and recommendations for future development of this parcel given these possible impacts.

Existing Conditions

Please refer to the applicant's above referenced wetlands report for a description of the on-site wetland system. The 9 acres of wetlands on this 22 acre property are nearly continuous. There is a small isolated body of water which was observed during the ERT site visit located approximately 50 feet north of the northwest corner of the existing parking. This area was marked on sheet 9 (Existing Conditions Plan) of the above referenced plan as "water", but not delineated by the applicant as a "regulated area" as defined by the Town of New Hartford's Inland Wetlands Regulations. It is the opinion of the Team Wetland Specialist that this body of water should be considered a regulated area for the following reasons:

1. A "regulated area" in New Hartford's regulation is ... "Any inland wetland or watercourse as defined in these regulations."

2. A "watercourse" in these regulations is defined as "... marshes, swamps, bogs, and all other bodies of water, natural or artificial ... "
3. A "marsh" in these regulations is an area "... with soils that exhibit aquic moisture regimes that are distinguished by the absence of trees and shrubs and are dominated by soft-stemmed herbaceous plants. The water table in marshes is at or above the surface throughout the year..."
4. The presence of common cattail (Typha latifolia) along the margins of this waterbody indicates that this area has water at or above the surface for prolonged periods. At the time of the site visit, we were toward the end of a six week "dry spell" with rainfall measurements 6 inches below normal. Despite these conditions, there was standing water present at this location. It is these indicators that qualify the area in question as a "marsh" and a "body of water" under the above definition for "watercourse" and should therefore, in the opinion of the Team Wetland Specialist, be considered a regulated area as defined by New Hartford's Inland Wetland and Watercourses Regulations.

Wetland Functional Values

For the larger, contiguous wetland, the applicant's consultant assigned "high" values for three of the most important wetland functions: flood storage, sediment/nutrient removal, and wildlife. The wetland received reduced values for "aesthetics" and "education." This appears to be an accurate depiction of the functional values of the subject wetland.

The small waterbody referred to above contains relatively low functional value, due to its small size, isolation from other much larger wetland systems, and the steep banks surrounding it.

Proposed Activities

Page nine (9) of the cited wetlands report states that " [T]here will be no direct wetland impacts on wetland flora and fauna as a result of the proposed development, since no work will occur in the wetlands." This statement should be revised, in light of the above discussion concerning the undelineated waterbody. In addition, it is not clear whether the proposed stormwater pipe located between manhole #8 and the existing head-wall along Rte. 202 will require the applicant to excavate within a regulated area, due to the fact that the wetland lines do not continue off the subject property and onto the state r.o.w. where this activity is proposed. All other activities do appear to be outside of what the New Hartford's Inland Wetland and Watercourses Regulations define as regulated areas. Additionally, all activities are proposed to be at least 50 feet from the contiguous wetland boundary with the exception of the detention basin.

Impact of Proposed Activities on Watercourses and Wetlands

In the absence of any direct impacts (filling/excavation) the focus of the wetland impact analysis has centered on the indirect impacts relative to hydrology, wildlife, erosion & sedimentation control and storm water quality.

Hydrology: The Slayback correspondence cited above addresses the hydrologic issue of the quantitative fluctuations for the water reaching the subject wetlands because of proposed changes in water drainage patterns. The conclusions reached within this correspondence based primarily on the relative size of the proposed disturbed area (11 acres) and the 230 acre watershed which contributes to this wetland, appear to be valid. Typically, it is the smaller, "dryer" wetlands that receive all or most of their water from a particular upland area that would warrant such concern.

Wildlife: The wildlife report determined through application of the WEThings TM modeling program that there were 26 "wetland-dependent species" that were or could be expected to be found on this parcel. Further, seven of these species would loose breeding habitat, only three of which, the applicant's consultant thought likely to occur on this parcel. What appears to go unsaid, is the fact that the near "build-out" scenario proposed for this parcel would remove most of the upland lands from this parcel and thus, as far as this parcel is concerned, reduce the habitat available for those wetland dependent species which also utilize the upland area for part of their life-cycles. Fortunately, the 50 foot development "setback" would preserve some of the most valuable upland areas relative to wetland functional values. While for such a highly valued wetland, a wider setback may be more effective for such functions as wildlife habitat and nutrient/sediment control, the 50 foot setback should be considered the very minimum setback in this instance.

The applicant's ultimate conclusion of "low impact" for wildlife function seems to be substantiated primarily by stating that there are other areas adjacent to this wetland system that are not likely to be further developed and will provide sufficient habitat to wetland dependent species. It appears that the current municipal zoning for this area does support this conclusion however this is no guarantee for the preservation of surrounding uplands in perpetuity.

The red-shouldered hawk, found on the applicant's wildlife list as a wetland dependent species that is likely to occur on this site, is a "species of special concern" as listed species in Connecticut's Act for the Protection of Endangered and Threatened Species. It is recommend that the applicant's wildlife expert further examine and comment on the possibility of its existence on this parcel. Finally, the great blue heron appeared on the applicant's wildlife list as a "listed species." This species was recently removed from the above referenced legislation where it had been a "species of special concern".

Stormwater Quality: Please refer to the stormwater section of this ERT report. In general, the applicant has proposed a redundant system of Best Management Practices including technology that has been proven to remove a substantial amount of the pollutants commonly found in urban stormwater. However, the use of this technology requires a thorough and persistent monitoring and management plan for items such as the detention basin, level lip spreaders, gross particle separators, catchbasin sumps, etc. which was not apparent during the review of the applicant's submitted material. These provisions should be made in writing in as much detail that is necessary and placed on the site plan itself in a notes section.

Erosion & Sedimentation Control: Please refer to the Soil Resources and Erosion and Sediment Control section which focuses on this issue. In addition, the following items are offered for consideration.

- The submission of a phasing plan by the applicant is to be commended. Three items are recommended to improve this plan, 1) a line on the grading plan demarcating the phase boundaries, 2) a statement in the narrative that ensures stabilization of the first phase prior to initiation of the second phase, and 3) a statement requiring inspection of the stabilization of phase one by the appropriate municipal officials.
- The possibility of having the developer of this site hire a certified erosion & sedimentation control professional who would be an integral part of the construction team was reviewed with the applicant's engineer. There was no discussion of this matter included with the revised material.
- The notes indicate that the outlet from the proposed basin will be adjusted as it is transformed from a sediment basin to a detention basin. More details for this action should be included.
- A critical link in the E & S plan is leading stormwater from the site off the southeast corner of the property to the remote sediment basin. The applicant's

engineer should comment if there are any hydraulic limitations to using proposed catchbasins 32 and 12A/12B as inlets for the temporary sedimentation basin.

- The stormwater pipe installation sequence referenced in the E & S Control notes mentions a manhole #6 which was not found on the plan. The sequence should be amended if necessary.
- The wetland boundaries should be clearly marked prior to the start of construction.
- The soil stockpile areas mentioned in narratives on the plan should be specifically delineated on the plan itself.
- For an intensively developing site such as this, temporary filter fabric envelopes on catchbasin grates may be more effective than haybales.
- The planned permanent and temporary vegetation including landscaping plan, seed mixtures, mulch types, fertilizer requirements and proposed planting dates should be included on the plan.
- Check dams along the swale proposed along Rte 202 may be necessary.

Soil Resources and Erosion and Sediment Control

The site was reviewed twice previously by the Litchfield County Soil and Water Conservation District to this date, with written reports being generated each time and submitted to the local Inland Wetlands and Watercourses Commission of New Hartford.

Documents reviewed for this ERT report include: Environmental Assessment Report (dated 8/14/97) - Modified Plan for Home Depot by Leonard Jackson Associates, Geotechnical Report (dated 8/97) prepared by Soil Mechanics Drilling Corp., Environmental Assessment Report (dated 8/14/1997) prepared by Leonard Jackson Associates, Site Plans (sheets 1-9 and Al-2) prepared by Leonard Jackson (dated 8/14/97, revised 10/6/97 per comments), Application for Special Exception (dated 7/23/97) Planning and Zoning Commission, Application for Site Plan (date unknown) - Planning and Zoning Commission, and Application for Permit (date unknown) - Inland Wetlands and Watercourse Commission.

As a result of the site walk and the review of the site plans, the following comments are offered for review and consideration:

1. Soils: Five basic soils types are identified on site: SwB (Sutton Stony Loam), CaB (Charlton Fine Sandy Loam), CrC (Charlton Very Stony Fine Sandy Loam), SxA (Sutton Very Stony Fine Sandy Loam), and Lg (Leicester, Whitman, and Ridgebury very stony fine sandy loams). [A detailed soils report may be found in the Appendix with details on soils characteristics, limitations, and suitability for use - *to be mailed with hard copy of report.*]

2. Under the Erosion and Sediment Control - construction sequence, sheet 6, it does not state at what point the *Stormceptors* would be installed. Clarification should be made.

3. The proposed earthen berm should be allowed to stabilize before any work is begun. The berm is currently planned to be seeded with annual ryegrass. It is critical that this grass be established. Additionally, a stone or rip-rap base can be installed along the length of the earthen berm to prevent scouring and ensure its proper function.

4. The site walk revealed a small depression filled with water approximately 80 feet northwest of the existing paved parking lot. The depression, surrounded and shrouded by saplings, also featured a stand of cattails. Technically, this is a watercourse and should be indicated on the map as such (note that the area is indicated on the current site plans and identified as "water"). The accompanying 50 foot buffer area around the perimeter of the area should also be indicated as a regulated area. The depression does not appear to be naturally occurring, as it has steep side slopes to approximately five feet in depth in an otherwise flat, upland grass field. It is possible that the depression is the remains of an old watering hole used for farming purposes.

5. The proposed "Temporary Sediment Collection Basin (future Water Quality and Detention Basin)" has a proposed bottom elevation of 1005.0 feet. The pipe outlet which will channel water out of the basin is at elevation 1007.0. The elevation of the existing adjacent wetland is at approximately 1012.0 feet. Point 14 of the Environmental Assessment Report (dated August 14, 1997), states that "the proposed site plan (grading, cuts, fills, retaining walls) will have no significant impact on water resources in the public water supply watershed zone." While the subregional watershed may not be impacted, it is likely that an open, excavated basin seven feet in elevation below an adjacent wetland would serve to lower the local groundwater.

6. Per the Connecticut Guidelines for Soil Erosion and Sediment Control, one silt fence is considered adequate protection for an area up to one acre in size or slope length up to 150 feet in length. As presently designed, the area to be cleared and graded is approximately 12.5 acres, while silt fences and hay bales are located only on the site perimeter. With an exposed soil base of this size, additional rows of silt fence or other sediment control measures should be installed in the main clearing area. Phasing the project so a smaller area of soil is exposed at a given time would also help to reduce the potential for serious erosion problems.

Stormwater Management

Construction Activities

Since the site construction involves the disturbance of over five acres, Connecticut's General Permit for the Discharge of Stormwater and Dewatering Wastewaters (the "Permit") will cover the project. The Permit requires that the site register with the Department of Environmental Protection (CTDEP) at least 30 days before the start of construction. The registrant must then prepare and keep on site during the construction a Stormwater Control Plan (the "Plan"). Please note that while this review is based primarily on the state Permit, many of the erosion and sedimentation issues are included in the Connecticut Guidelines for Soil Erosion and Sediment Control (the "Guidelines"), and are issues that must be dealt with on a local level before being included in the Plan.

The "Stormwater Management Analysis and Design" states that 11.5 acres will be disturbed, and the "Erosion and Sedimentation Control Plan - Narrative" states that 12.88 acres will be disturbed. This needs to be consistent.

The Plan must include a site map as described in Section 6(b)(6)(A) of the General Permit and a copy of the erosion and sedimentation (E&S) control plan for the site. The E&S plan that has been approved by the Town in conjunction with the CTDEP Inland Water Resources Division (IWRD) and the local Soil and Water Conservation District may be included in the Plan. This plan and site map must include specifics on controls that will be used during each phase of construction. Specific site maps and controls must be described in the Plan, as well as construction details for each control used. The permit requires that " the plan shall ensure and demonstrate compliance with" the Guidelines.

Due to the amount of soil disturbance, one of the best ways to minimize erosion potential would be to phase construction in order to minimize unstable areas. However, due to the balance of cuts and fills, phasing will be extremely difficult. Section 6(b)(6)(B) requires a more detailed identification of construction sequencing and the accompanying changes in controls than are currently shown on the E&S Plan, and the Plan must be flexible to account for adjustment of controls as necessary to meet field conditions. For example, there is a significant cut on the west side of the site; the plan should have specific controls in this area for dealing with this cut. It is recommended that temporary diversion trenches to control run on and runoff to the various areas of the site are incorporated wherever possible and moved as necessary to adjust for the cuts and fills.

The plan should emphasize the importance of early stabilization wherever possible. In the "Responses to Edward J. Sweeney Letter of June 23, 1997", the plan states that a maximum slope of 2:1 will be used "in lieu of the use of Geo-Grid or other soil stabilization techniques." Due to the high silt content of the soil, it is highly recommended that this statement be reconsidered; a 2:1 slope is steep enough that some sort of geotextile would be extremely useful. It is much cheaper to install such measures than to have to continually revisit a failing slope.

The permit (Section 6(b)(6)(D)) requires inspections at least once every seven calendar days and after every storm of 0.1 inches or greater. The plan must allow for the inspector to require additional control measures if the inspection finds them necessary, and should note the qualifications of personnel doing the inspections. In addition, the plan must include monthly inspections of stabilized areas for at least three months *following* stabilization. In particular, since phasing will be difficult and a large amount of disturbance will occur at once, there must be someone available to design and adjust E&S controls for changing site condition, who has the authority and resources to ensure that such necessary changes are implemented.

Section 6(b)(6)(C)(ii) of the permit requires the plan to address dewatering wastewaters, which this site will unquestionably generate. The plan does not currently address treatment of dewatering wastewaters.

The permit (Section 6(b)(6)(C)(i)(2)) requires that for areas where between two and five acres will be disturbed, a sedimentation basin or sedimentation trap will be available that will store a minimum of 134 cubic yards of water per acre disturbed; and for an area where greater than five acres are disturbed at one time, the Plan must show that a sediment basin will be available that will store a minimum of 134 cubic yards of water per acre disturbed. The current design for temporary sedimentation does not appear to meet this requirement. In addition, there are concerns with the method of channeling flow to the basin during construction, including:

- The construction sequence calls for installation of the basin before any other construction takes place. Where will the fill from the basin be placed, and how will this be controlled if no other measures have been installed?

- The construction sequence calls for installation of the 36" pipe to the sedimentation basin and catch basins 12a and 12b. The sequence does not mention installation of catch basins 10 and 11; and if these basins are installed with the pipe, they will be extremely difficult to protect during construction since they are in the anti-tracking pad. If they are installed later, where will the runoff go while they are being installed?

- The construction sequence does not include installation of the *Stormceptor* treatment units. If these units are installed along with the basin and 36" pipe, the plan must include requirements to inspect and clean them frequently, since they are not designed to handle construction loads. If they are installed later, where will the runoff go while they are being installed?

- Overall, using a separated basin to control construction sediment does not appear to be an efficient method of handling runoff. Pipes and catch basins which are adequate to handle post-construction runoff may quickly become plugged with construction loads. If this method is used, additional controls and maintenance must be added to the plan, as well as a contingency for times when the pipe is not available to collect runoff.

The plan discusses use of a berm, haybales and silt fences to direct runoff to catch basins 12a and 12b and then to the sedimentation basin via the 36" pipe. However, it appears from the construction sequence that the installation of the septic system and concurrent building of the eastern retaining wall will not allow for installation of these measures as shown during these activities, which, due to the cuts and fills, will be the primary on-site grading activities. This apparent discrepancy needs to addressed in the plan detail.

Post-construction stormwater management includes floor drains in the garden center. DEP does not typically approve the connection of these drains to the stormwater system. With the permission of the local POTW, DEP has been recommending that small garden area floor drains, where absolutely necessary, be sent to the sanitary sewer. If it is necessary to install the septic system, however, this option is not feasible. Because these two drains are 6" pipes and the primary pollutant will be fertilizer from plant watering in this area, it is recommended that these drains be removed from the stormwater system and sent to a level spreader in an area where they will fertilize Home Depot's landscaping plants.

The plan did not include sizing calculations for the sizing of the *Stormceptor* treatment units.

Commercial Activity

The completed site will need to register for Connecticut's General Permit for the Discharge of Stormwater Associated with Commercial Activities before opening. This permit requires that the permittee prepare and keep on site a Stormwater Management Plan. This Plan will include schedules for maintenance of all erosion control structures, the proper maintenance of which is a crucial aspect of the designed functionality of the controls. The permit also requires that the facility have an on-site team to maintain the Plan, regular sweeping of all paved areas, minimize outside storage, and have a spill control plan and employee training. The Plan must also address the storage of materials to control storage of potential pollutants near the garden center floor drains.

Appendix

For Appendix Information Please Contact
the ERT Office at 860-345-3977