LETTER
2
RESPONSE

Hetfield Homeowners
March 7, 2011

2-1 **Comment:** Drawings and figures in the DEIR are not entirely legible; requesting better figures and questions the location of the 8-lot alternative subdivision plan.

Response: The figures contained in the hard copy of the DEIR are the best that can be printed. A large set of plans can be viewed at the Town Planning Department on Rheem Boulevard. The 8-lot subdivision is contained within portions of the 6-lot subdivision. The distance from the subdivision to the residences on Sanders Drive does not change from what is shown on Figure 2-1.

2-2 **Comment:** Questions whether land outside of the 8-lot subdivision layout would be added to open space and when the open space designation would be made permanent.

Response: Under the 8-lot subdivision alternative, all of the land outside of the development area would be designated open space (just like the proposed project). The open space designation will be made by means of a recorded conservation easement, which will occur when the final map is recorded.

2-3 **Comment:** Requests a clearer drawing of the original 6-lot subdivision proposal.

Response: Refer to Response to Comment 2-1. Figure 5-1 is the clearest that can be printed due to a faint original.

2-4 **Comment:** Questions where the proposed property lines lie in relation to each of the Sanders Drive homes on the south side of Sanders Drive.

Response: The property line would be a matter of record and would be shown in the title reports for the property as well as survey reports. The property line is clearly depicted on Figure 2-1.

2-5 **Comment:** Asks what are the specific setbacks for each house in the 8-lot subdivision alternative.

Response: The setbacks would be the same as those in the Sanders Drive neighborhood: 10 feet sideyard or 25 feet aggregate sideyard, which are the designated setbacks under the zoning ordinance. Because the 8-lot alternative is more compact than the six-lot proposed project, the sideyards would be narrower than what is proposed, but yet meet the zoning ordinance setback standards.

2-6 **Comment:** Asks how the 8-lot subdivision would be plotted; requests a drawing that would show this plotting similar to Figure 3-1.

Response: It is unknown at this time how the plotting for the eight-lot alternative would be designed. If the eight-lot alternative were selected as the project, a plotting plan would be required which would include building envelopes. Such a plan would be submitted prior to approval of the conceptual development plan.

2-7 **Comment:** What specific software program was used to calculate the slope densities for the 6-lot subdivision? What was precise source of input date; and can the public review the input data and steps used to calculate the densities?

Response: The slope density calculations were prepared by the applicant's engineer and reviewed by Town staff. The Guidelines for Interpreting and Implementing the Moraga Open Space Initiative defines a cell as a polygonal shaped area comprised of a minimum of 10,000 square feet. Its function is to describe a specific area for the purpose of ascertaining the average slope grade of the cell. The resulting slope grade calculation determines whether development within the cell may be permitted or prohibited (Ordinance sections 3b, 3d). (Refer to Municipal Code .136.020: Definitions and Calculations for Determining Slope.) The applicant used the slope calculations as defined in the Guidelines. Also the Guidelines state that the applicant has the burden to present evidence that supports the findings necessary to the decision which it seeks. Thus, the applicant provides the calculations, which are reviewed by staff.

2-8 **Comment:** What exact area on the map did the developer use to perform cell calculations?

Response: The slope calculation was based upon the developable area of the project site as identified on Figure 3.4-3 in the DEIR. The commenter should also refer to Response 2-7, which explains the methodology for determining whether development can occur within a cell.

2-9 **Comment:** Has a cell calculation been performed for the 8-lot subdivision alternative?

Response: A cell analysis was completed by the applicant's engineer for the 8-lot subdivision. The calculation formula is the same as that which is required in the Municipal Code (Section 8.136 020 A3) and the MOSO Guidelines. The formula for determining the slope calculation is as follows:

$$\frac{\text{Length of contour}}{\text{Contour interval and area}} = \text{Percent}$$

The slope calculations are as follows:

Lot Number	Percent of Slope
1	10.2 %
2	19.17 %
3	16.43%
4	13.81%

5	17.40%
6	14.75%
7	19.19%
8	8.53%

2-10 **Comment:** Did the town's consultant discover other omissions in the MOSO cell calculation?

Response: No other omissions pertaining to the slope analysis were found.

2-11 **Comment:** Does the amount of land omitted from the original MOSO calculation exceed the 20 percent slope when the lot is recalculated?

Response: The addition of the small piece of land that was omitted from the cell on Lot 1 would result in a slope of 18.49 percent as compared to 18.39 percent. The new calculation is still under the 20 percent maximum slope requirement. Refer to Figures 3.4-3 and 3.4-4 in the DEIR.

2-12 **Comment:** Did the town's consultant calculate the slope independently for the 8-lot subdivision alternative? If the consultant did not calculate the slope, who did they rely upon and what was the methodology/formula used?

Response: The Town independently reviewed the applicant's cell calculations for the 8-Lot Subdivision and found that the calculations comply with the MOSO requirements. See Response 2-9 for an explanation of the method of slope calculation under MOSO.

2-13 **Comment:** Requests dimension and location of debris benches for the 8-lot alternative and elsewhere in Moraga.

Response: The location of the debris benches on the Hetfield project are positioned at the mouth of drainage swales. The corrective grading and location of debris benches would not be influenced by the lot yield of the project. With regard to their dimensions, the grading plans indicate the benches are variable in size, ranging from approximately 60 to 200 feet in width, with a 10 percent gradient to the northeast. The benches are deepest at the mouth of the drainage swale, where they range up to 40 feet wide, but taper rapidly in width toward their lateral margins.

Debris benches are used for many projects constructed in the East Bay area during the past 20 years. They are normally located at or near the boundary separating permanent open space from residential lots. The intent of debris benches is to intercept mud and water originating in open space before it can impact residential lots. Debris benches located in Moraga include: (a) on the south side of the ridge in the Los Encinos project, and (b) near the terminus of Kimberly Lane. Additionally, debris benches are part of the subdivision improvements in the Wilder project, the residential project located just south of the Gateway interchange of Highway 24, in the City of Orinda. Specifically, there is a debris bench just east of residential lots located at the base of a high slope in the northeast portion of the project, and others

are located along the west boundary of the graded and developed area in the Wilder project. With regard to access, debris benches in land development projects will likely require access to be granted by the property owner in the form of an easement.

2-14 **Comment:** Requests clarification of need for and dimensions of retaining walls to avoid conflict with Policy PS4.12 (*sic*, should be PS4.11).

Response: No use of retaining walls is shown on the plans submitted by the applicant for the proposed project as it does not require retaining walls for stability. Proposed Mitigation Measure 3.2-3D on page S-10 of the DEIR requires the provision of low retaining walls with subsurface and surface drainage facilities at the toe of the major fill slope of the site at the rear of the building pads to control drainage in the yard areas of the proposed residential lots. Consequently, this mitigation measure is consistent with PS4.11. Specifically, the earthwork performed for the project will compact engineered fill to 90 percent relative density. The compacted fill will have a low permeability. Most of the rain that that falls directly on the 3 to 1 graded slope will run off toward the graded pad at the toe-of-slope. Typically, the contractor will grade rear yards so that they drain away from building sites. However, homeowners and their landscape contractors often obliterate rear yard drainage, and this can result in water beneath foundations of dwellings. To efficiently intercept water, the mitigation measure suggests that a low retaining wall with concrete lined ditch behind the wall to intercept runoff from the 3 to 1 slope before it reaches the pad area. If retaining walls are unacceptable for policy reasons, a concrete-lined ditch could be constructed at the toe of slope to intercept the slope runoff. (The low retaining wall called for by Mitigation Measure 3.2-3D is merely intended to protect the ditch from possible conflicts with rear yard improvements.) The wall on the order of three feet in height would provide space for the ditch. With regard to the project proponent's plans, there are no retaining walls shown on the grading plans, and no detailed improvement plans are available for buildout of the six lots. It should be recognized that the application is a request for the approval of a 6-lot subdivision, and the regulations administered by the Town do not require submittal of detailed plans for the future construction on the site. Retaining walls that are over three feet in height would require a building permit. The text has been amended to reflect the correct policy number; refer to ERRATA.

It is noted that the 8-lot alternative reflects the use of a four-foot high retaining wall behind the lots. This would be similar to the use of a low-retaining wall as explained above.

2-15 **Comment:** Requests explanation of “competent material” relative to removal of landslide debris.

Response: The excavation shall extend through all landslide debris and into bedrock. Routinely, the project engineering geologist views exposed conditions and determines if the excavation has extended through all slide debris and into the underlying bedrock. To document exposed conditions for the "Grading Completion" report, the project engineering geologist logs the orientation of bedding and rock types on the floor of the keyways. The Town’s Public Works Department and the Town’s Geologist observe field conditions and field procedures to verify that the

earthwork being performed is property controlled and consistent with the provisions of the Grading Permit and geotechnical report.

2-16 **Comment:** Requests information about specific "other slope stabilization measures."

Response: For the Eight-Lot Alternative, corrective grading would be limited to the landslide areas presenting a risk to the smaller development area shown on Figure 5-1 of the DEIR. This would eliminate the need for corrective grading of the westernmost and easternmost slide areas shown on Figure 3.2-2. The commenter's cited text in the DEIR, page 5-5 indicates that where landslides are located within the footprint of the eight residential lots and extend upslope of those lots, the corrective grading would follow the grading concept of the proposed project (i.e., removal of all slide debris from the residential lots; construction of a fill slope with a gradient of 3:1 engineered fill; and construction of debris benches in swale areas at the top of the fill slope). The location of the toe of the fill slope would be unchanged from the proposed project.

2-17 **Comment:** Questions what other slope stabilization measures and other proposed or contemplated actions on the part of the developer are estimated under the 8-lot subdivision.

Response: The project proponent has not submitted a corrective grading plan for the Eight-Lot Alternative. However, based on the approach to corrective grading of landslides for the proposed six-lot subdivision, the EIR infers that the need for corrective grading of the easternmost and westernmost landslides shown in Figure 3.2-2 could be eliminated (i.e., DEIR Figure 3-2-2 identifies yellow slide area on Lots 1 and 6). For the alternative, these two slide areas could be retained as ungraded private open space. In other respects, the concept for corrective grading for the Eight-Lot Alternative would be identical to the proposed project. In summary, the volume of earthwork required for corrective grading would be reduced by approximately one-third. The concept would continue to be based on removal of landslide debris that presents a hazard to the eight lots, use of 3:1 gradients for fill slopes, and construction of debris benches in the swale area at the top of the fill slope.

2-18 **Comment:** Questions whether tree screen or bushes behind homes on Sanders Drive would be removed at any stage of the project, including the 8-lot subdivision alternative.

Response: Under the 8-lot subdivision alternative the number of trees to be removed would be less than with the proposed six-lot subdivision. The trees to be removed between lots 1 and 8 would be the same as those identified with the conceptual development plan for lots 1 through 5. No tree removal would occur along the creek except at the creek crossing and the cleanup of dead trees that currently exist along the creek corridor. A discussion of the tree removal is found on page 25 and 26 of Appendix C (Initial Study) in the EIR. Mitigation Measure IV-5c (Appendix C) calls for a tree replacement program to be prepared by the applicant's consulting biologist. The identity of the trees to be removed will be known at the time final grading plans are submitted for review and approval by the Town engineer. This plan must be provided prior to the issuance of the grading plan and will require a tree replacement ratio of 3:1.

2-19 **Comment:** Questions how many trees would be planted during first phase of construction and how many feet from Sanders Drive homeowner's property boundary.

Response: A landscape plan has not been submitted. Thus, there is neither number of trees designated nor has the distance of the proposed new trees from Sanders Drive residences been identified. The applicant is required to submit a landscape plan for review and approval by the Town.

2-20 **Comment:** Questions how many trees would be planted after the initial "tree screening" phase has been completed.

Response: The exact number of trees to be planted is unknown at this time. The landscape plan must provide a sufficient number of trees to meet the intent of Mitigation Measure IV5-C, page S-22 of the DEIR, which calls for a tree replacement ratio of 3:1. The tree replacement program must be submitted to the Town prior to issuance of the grading permit. Refer to pages 22 and 23 in Appendix A of the EIR.

2-21 **Comment:** Asks how the "tree screening" would change with the 8-lot alternative when compared to the proposed 6-lot subdivision.

Response: The requirements for a tree screen would be no different for the 8-Lot Subdivision Alternative than what is required for the proposed project.

2-22 **Comment:** Applicant should be required to post a reasonable bond in connection with any preparation of the property and that the amount should be fixed at this point of the process at no less than $5 million, adjusted for inflation.

Response: The commenter suggests that the applicant be required to post a $5 million bond to assuage neighbors concerns regarding life and property. The Town uses its bonding requirements as a means of ensuring completion of the site subdivision improvements in the event that the applicant cannot or does not complete the work. The dollar amount of the bond is set by the Town based upon the value of site improvement work. The bond must be provided to the Town prior to the issuance of a grading permit. Details of how the Town will set the amount of the required bond is presented in Response 2-23.

In summary, construction bonds are not used as a means to provide insurance against health or property hazards, but the Town will require the applicant to provide proof of liability and other insurance prior to grading (e.g. Workman's Compensation).

2-23 **Comment:** A $5 million dollar bond should be required of the applicants in the event any property or person is harmed or injured during excavating, grading or any other development activities. This should be a requirement of the Conditional Use Permit.

Response: Bonds do not act as a liability insurance, which is requested in the comment. As discussed in 2-22, the bond requirement ensures completion of the site subdivision improvements. Bonds are determined based upon the "Engineer's Estimate" of improvement costs, which is submitted with the engineering

construction plans as they go through the plan check process with the Town. The Bond Estimate is then reviewed and approved by the Town engineering staff and the Town Engineer prior to approval of final engineering plans. The Town then requires a 100 percent Labor and Materials and a 100 percent Faithful Performance Bond (i.e., bonding essentially twice the amount of the Engineer's Estimate). Therefore, the bond will be determined when the engineering construction plans are submitted. It is noted that the applicant will be required to provide evidence of adequate liability and other insurance to the Town prior to beginning work on the site. For future reference, the subject of bonding the project is not relevant to determine the adequacy of the EIR.

2-24 **Comment:** Concerned with the viability of a proposed GHAD or homeowners association to protect the safety and property of any adjacent or nearby homeowners affected by the project. Requests a $10 million bond as a condition of the land use permit before any work begins on the construction of any homes.

Response: Refer to Response to Comments 2-22 and 2-23 regarding the bonding mechanism and how it is applied. The project will be included in a special District (GHAD) that would have responsibility for long-term maintenance of specified subdivision improvements (e.g. debris benches, stormwater detention facilities, open space and wetland mitigation ponds). The bonding amounts, by code, are related to the cost of improvements and are intended to ensure that subdivision improvements are installed. The dollar amount of bonds is not arbitrarily determined, and the bond is not released until the Town of Moraga has accepted the improvement.

2-25 **Comment:** The commenter is requesting that a condition regulating the size of future homes be placed on the project. The size should be no greater than 3,000 to 3,500 square feet.

Response: A mitigation measure (or condition of approval) limiting the size of the homes can be added to the Conditional Use Permit and Conceptual Development Plan (CUP/CDP) approvals. The EIR provides guidelines, which can be used by architects when designing the future homes. Furthermore, the floor area ratio (FAR) of .23/20,000 square feet would be applied when considering the size of the houses. The square footage of the house can be greater than the neighboring houses, but still look similar in design. Design review will occur later in the planning process after approvals of the CUP/CDP and tentative map.

2-26 **Comment: Question** raised as to how the consultant compared the 8-lot subdivision lot size with the adjoining Sanders Drive lots.

Response: The 8-Lot Alternative plan shows the adjoining lots. These lots range in size from approximately 13,500 square feet to 22,100 square feet. As discussed on page 5-2 of the EIR, the proposed lots under the 8-lot subdivision alternative range in size from 16,529 to 22,840 square feet.

2-27 **Comment:** If the 8-lot subdivision is approved, asks how the massing and stepping will change from that shown for the proposed project.

Response: Because the lots shown in Figure 5-1 are narrower than those shown in Figure 2-1 for the proposed project, it is likely that the houses would be stepped; however, it is assumed that these would be similar to what is shown on Figures 2-2 through 2-4. However, the commenter should be reminded that there are no formal design plans submitted at this time.

2-28 **Comment:** Concerned that the proposed project would result in a similar situation as that which occurred on Vista Encinos; the land is subdivided and then the map is sold to someone who develops the property which has sat vacant for several years. Requesting assurance that the Hetfield project won't end up as Vista Encinos project.

Response: Information acknowledged about the Vista Encinos project; however, this is not relevant to determining the adequacy of this EIR. Therefore, no additional response is required.

2-29 **Comment:** Requests that the design-level geotechnical report be submitted to the Town prior to recordation of the subdivision map.

Response: The Subdivision Map Act (Article 7, Section 66490) requires a geotechnical report prior to recordation of the Final Subdivision Map. The reason for not linking the geotechnical report to the filing of the Final Map is that geotechnical design details will be dependent on the approval that is granted by the local jurisdiction and, as noted in the DEIR, design details such as foundation systems, keyway dimensions, subdrain design, and earthwork specifications are not needed for preparation of an EIR or for processing of the Tentative Subdivision Map.

2-30 **Comment:** Asking whether the public will have an opportunity to review and comment on the design-level geotechnical report and whether the public would be notified when the report is submitted to the Town.

Response: The geotechnical report is submitted to the Town of Moraga at the time that the applicant is requesting recordation of the Final Map. It is a report that is reviewed by the Town's Public Works Department and Town's geologist. There is no Town policy requiring notification of community groups or neighboring property upon submittal of the geotechnical report, but such reports are public information. It may be possible for an interested party to make a written request to the Planning or Public Works Directors, asking to be notified of the submittal.

2-31 **Comment:** When does the developer expect to submit a subdivision map and will the public have an opportunity to review and comment on such a map?

Response: In Moraga there are three stages of development plan approval in planned development districts. (Moraga Municipal Code § 8.48.010 *et seq*.) With each phase of development additional information and details of plan implementation are developed, tested, and proposed to the Town. The first stage is approval of a conceptual development plan. The second stage of the process is approval of a general development plan. The final stage is approval of a precise development plan.

The applicant is currently requesting approval of its Conceptual Development Plan and a Conditional Use Permit (CDP/CUP). If in concept the project is acceptable, the

applicant will proceed with development of a general development plan, and at that time, the applicant may submit an application for a tentative subdivision map that will be submitted to the Town Planning Commission for approval. At that time the public will have a chance to review and comment on the applicant's requested tentative subdivision map.

2-32 **Comment:** Requesting information as to reviewing the draft deed disclosure recorded against each lot as required in Mitigation Measure 3.2-1G. Does the public have an opportunity to review and comment?

Response: A deed disclosure is intended to advise future property owners or buyers of potential hazards, maintenance responsibilities, or other limitations on the use of the parcel. For example, a deed disclosure might indicate that no grading or construction of improvements is allowed on the 3:1 slope without a geotechnical report and without approval of the Design Review Board. As written, there is no requirement for review of the deed disclosure by interested parties. It may be possible for an interested party to make a written request to the Planning or Public Works Directors, asking to be notified of the submittal of the draft deed disclosure.

2-33 **Comment:** Asking about procedures and whether the public will have an opportunity to review and comment on the erosion control plan as required in Mitigation Measure 3.2-3B.

Response: Erosion and sediment control encompasses various measures in addition to silt fences and hay bales. It is important to have minimized the areas of disturbed soils and the duration of exposure. It is also imperative to control water at upslope boundaries of the graded area, control water on-site, and control sediment at the downslope site perimeters. The Erosion Control Plan is subject to technical review by the Public Works Department/Grading Technician, and by the Town's Geologist. There are no hearings on erosion control plans and no provision for review by the public. It is public information and it may be possible for an interested party to make a written request to the Planning Director or Public Works Director, asking to be notified of the submittal of the Erosion Control Plan.

2-34 **Comment:** Questioning why the Mitigation Measure (3.2-4A) limits the criteria to the 2007 California Building Code and Ordinance Code when in fact development could take up to six to seven years.

Response: The EIR authors concur with the comment. Mitigation Measure 3.2-4A has been modified to include "the latest version" of the California Building and Ordinance Code. The Commenter should refer to the change in the ERATA.

2-35 **Comment:** Will the public have an opportunity to review and comment on the Design Guidelines that are required as Mitigation Measure 3.1-3D?

Response: Design Guidelines are submitted as a part of the planning process. The guidelines are reviewed by the Design Review Board and recommended for approval by the Planning Commission. The public would have an opportunity to review the guidelines and comment in a public hearing.

2-36 **Comment:** How and when will public know if the design-level geotechnical and geologic investigation report by the Town's Peer Review Geologist has been approved or rejected? Does the public have the opportunity to review and comment?

Response: The Town's Peer Review Geologist provides a professional opinion on the adequacy of the geotechnical report. Normally those comments are provided directly to Town staff. If the peer reviewer identifies deficiencies, the Town will transmit a copy of the peer review letter to the project proponent with a request for additional technical data responding to the questions that have been raised. (The Town's Public Works Director may have additional comments and concerns.) When the geotechnical report is updated in response to comments, the peer review procedure is repeated. In summary, it is not the role of the peer reviewer to approve or reject the geotechnical report. The peer reviewer provides a professional opinion to Town staff. Staff will determine if the report is adequate for recordation of the Final Subdivision Map. The geotechnical report and the letter(s) issued by the peer reviewer are public information. The public can offer comments to the staff, but it is a technical report and there are regulations and methods of engineering analysis that guide the preparation of reports and their review.

2-37 **Comment:** What mechanism is put in place for public to review and comment upon observations and approval of Grading Technician?

Response: The Moraga Public Works Department has authority for review and approval of erosion control plans. The engineering inspectors, who have had training in erosion control methods, monitor compliance with the provisions of approved plans. Once erosion control plans have been submitted to the Department, they are public information. They are available for review in the offices of the Public Works Department during normal business hours. Erosion control plans must be approved prior to commencement of construction, but it is not unusual for the plans to evolve during the construction period, particularly during the late summer when the condition of the site and/or amount of grading to be completed during the construction season is defined. Where possible, it is usually desirable to intercept runoff originating in ungraded open space and direct it around the disturbed area. In that way, the erosion control plan can be limited to control of water that falls on the graded area.

The Public Works Department has received calls from neighboring property owners, calling attention to erosion and/or sedimentation problems. For example, during a heavy rainstorm, a culvert inlet could become blocked. The Public Works Department appreciates neighborhood contacts, and follows up to see that the erosion control measures are functioning as designed.

2-38 **Comment:** Will the public have an opportunity to review and comment on the tree-planting plan? How is the public informed? What is the process for approving the Mitigation Monitoring Plan?

Response: As with the erosion control plans, the tree planting plan is submitted and becomes a part of the public record for review in the offices of the Planning Department. As stated in the Mitigation Monitoring and Reporting Program, the plan would be submitted for design review prior to issuance of a grading permit. If the

Design Review Board reviews and approves the plan in a public hearing, the public would have input at that time. The mitigation monitoring plan is a part of the EIR and is approved at the time the EIR is certified. The plan is required by State Law to show who will implement the mitigation measures and when. Furthermore, it shows who has the responsibility to initiate the mitigation measure and who is responsible for insuring that the measure has been completed.

2-39 **Comment:** Concerned that there is no recognition of testimony in the DEIR regarding flooding along Larch Creek.

Response: As a part of due diligence in addressing testimony about local flooding at the public hearing for the draft IS/MND, Mills Associates took the logical action of contacting the two agencies primarily responsible for flood control in the Town of Moraga; i.e., the Town Public Works Department and the Contra Costa County Flood Control and Water Conservation District. Representatives for both agencies said that they had no knowledge of flooding in the vicinity of Sanders Drive and Hetfield Place because nobody reported flooding in the area. It is typical in preparing an EIR that agencies are contacted to obtain data and reports of previous storm events that may have caused problems. Unless the information is brought forward at the start of the process, the EIR authors would not know of a localized flooding situation. However, based upon the testimony provided at the IS/MND hearing, the EIR (page 3-41) acknowledges that the property at 1112 Sanders Drive flooded during two different storm events.

However, the issue at hand is whether or not the proposed Hetfield Estates project would exacerbate the potential for flooding in Larch Creek. As stated in the EIR, the primary cause of any flooding is the restricted cross-section and clogged Larch Creek channel resulting from fallen tree trunks, branches, and vegetative overgrowth along the creek.

In 1998, KCA Engineers, Inc. prepared a drainage study of Larch Creek for the Town of Moraga. This study was undertaken because of flooding problems in the gently sloping area between Larch Avenue and Camino Pablo. The flooding in this area was caused by restrictive creek flow conditions that, in turn, restricted free discharge of the upstream portions on the creek adjacent to Sanders Drive in the vicinity of Hetfield Place. The KCA Engineers study recommended improvements that included lining the creek channel between Larch Avenue to Camino Pablo to provide a flow capacity of 300 cubic feet per second. This lining has not been done, and the creek is still restricted and clogged with vegetation. Therefore, the capacity of the creek is insufficient to convey flows from the 100-year storm (a storm with a one-percent probability of occurring each year) that may result in upstream flooding.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panel 060637000W, dated May 19, 1981, shows that the water level in Larch Creek opposite Carr Drive would be 516 feet above sea level during a 100-year storm, which is below the elevation of approximately 560 feet at the street intersection. FEMA did not study flood flows upstream of that location. The cross-sections on Figures 3.3-2 and 3.3-3 of the EIR show that the creek levels during the 100-year, 12-hour storm are well below the tops of the banks of the creek and the properties along Sanders Drive.

The proposed project includes a Storm Water Control Plan (SWCP) as required by the Contra Costa Clean Water Program (RMR Design Group, 2008a). The purpose of this program is to make runoff from a proposed project emulate, as closely as possible, the runoff from the pre-project, undeveloped property. This SWCP includes Integrated Management Practices (IMPs) consisting of eleven vegetated swales and one bio-retention area that are designed in conformance with the Clean Water Program C.3 Guidebook. The primary purpose of these IMPs is to remove pollutants from the runoff. However, these IMPs also detain runoff temporarily in the hollows of the vegetated swales, thereby reducing the rate of discharge to Larch Creek.

The proposed project also includes a 9,430-cubic-foot detention basin that is designed to hold runoff so that the rate of discharge to Larch Creek after the project is built would be no greater than runoff from the existing undeveloped site. Therefore, there would be no significant impact from the rate of runoff from the proposed project on Larch Creek.

2-40 **Comment:** Requests location and dimensions of subdrain cleanouts.

Response: Cleanouts are located at the ends of the subdrains and consist of ells (either 90 degrees or two 45 degrees) and riser pipes with caps on the ends. They would be 6 inches in diameter, the same as the subdrain pipes. Figure 3.2-3 of the EIR shows the subdrains as pink and green lines. The circles at the ends of the lines are cleanouts (i.e., risers). Cross-sections showing the subdrains are presented on Figures 3.2-4 and 3.2-5 of the EIR.

2-41 **Comment:** Requests location of subdrains for Lot 6.

Response: See Response to Comment 2-40.

2-42 **Comment:** Requests location of subdrains for the 8-lot alternative.

Response: The subdrains and cleanouts for the eight-lot subdivision would be in similar locations as those for the proposed six-lot subdivision, but the length of the subdrains would be shorter since the development area does not encompass as much of the site as the proposed project. Specific details, such as the location of subdrains and cleanouts, are unknown. It is noted that the 8-Lot Alternative is conceptual and specific details are not required for an analysis of alternatives to the proposed project.

2-43 **Comment:** Requests location of outlet structure at Larch Creek.

Response: The detention basin and outlet to Larch Creek near Hetfield Place are located north of the roadway crossing Lot 2 as shown on Figure 3.3-1 of the EIR.

2-44 **Comment:** Requests location of existing detention basin in Moraga.

Response: A similar detention basin to that proposed for the project is located on Kimberley Drive near Scofield Drive. Robert Rourke of the RMR Design Group inspected this basin following a big storm on December 31, 2005. Another similar detention basin is located at the end of Laird Drive near Rheem Elementary School.

2-45 **Comment:** Requests location and dimensions of energy dissipation structure and information regarding ongoing maintenance of the structure.

Response: The energy dissipater would be a concrete structure consisting of blocks to break up the concentrated flow at the outlet of the detention basin discharge pipe in Larch Creek. The location of this structure is shown on Figure 3.3 –1 of the EIR. The exact dimensions of the outlet structure would be determined during design of the storm drain system, but it would be approximately 6-feet square with 45-degree side walls as shown on Figure 3.3-1 of the EIR. Riprap may be placed below the outlet structure. The outlet structure would be cleaned and maintained through the Joint Maintenance Agreement funded by the homeowners as required by Mitigation Measure 3.3-5B of the EIR.

2-46 **Comment:** Requests discussion of potential geomorphological impacts and distances from storm drain discharge location on Larch Creek where these impacts may occur.

Response: The developer does not have to "eliminate the geomorphological impacts that are expected to occur upstream and downstream of the [detention basin] discharge location". The developer only has to ensure these impacts are less than significant. The proposed project would reduce the flow reaching Larch Creek upstream of the detention basin outlet and increase the flow downstream of the outlet. However, these changes would be minor in comparison with the total flow regime of the creek. Flow above the outlet would be significant due to the other sources of runoff described in the response to Comment 2-50. Flow rates downstream of the outlet would be slightly higher, but would be the same as existing, undeveloped conditions at the western boundary of the project site. There may be some change in movement of rocks and soil in the creek along the 1,487-foot (1/4-mile) frontage of the developable portion of the proposed project, but these movements would be minor. Therefore, the environmental impacts would be less than significant. The distances where the impacts would occur are 1,056 feet upstream and 431 feet downstream from Hetfield Place as determined by the circuitous frontage of the proposed property along Larch Creek (RMR Design Group, 2008b).

2-47 **Comment:** Requests information regarding funding of the Joint Maintenance Agreement for the storm drain system.

Response: A major storm generates five inches or more of precipitation (approximately 17 percent of average annual rainfall). The cost to maintain the cleanouts would depend upon the storm activity. Such costs are unknown and are relevant to the project but not to determining the adequacy of the EIR. The mitigation measure requires that a Joint Maintenance Agreement be included with the property deeds and must be provided prior to issuing an occupancy permit. The onus of preparing the JMA is on the applicant/builder and proof of the formal agreement must be provided to the Town. As stated in the mitigation measure, the maintenance costs would be distributed equally between the six homeowners. If houses are not built on all six lots, or if some houses are vacant, the cost would be divided among the other property owners. As stated in Mitigation Measure 3.3-5B, potential homeowners would be informed of their obligations to pay for the Joint Maintenance Agreement (JMA) and would have to sign a document committing to paying an annual fee. The JMA would be managed through a homeowners association that

would send out bills annually similar to property tax bills. Penalties would be assessed if they do not pay. Engeo, the applicant's geotechnical consultant, states that when subdrains are constructed using the types of pipe and permeable materials that have been recommended, it is their experience that the need for maintenance or repair of a subdrain is rare (Skinner, 2011). Bankruptcy by the previous owner of the Hetfield property on the southwest side of the ridge is not relevant to determining the adequacy of this EIR.

2-48 **Comment:** States that volume of storm runoff from the proposed project would increase.

Response: The EIR authors concur with the comment that the ultimate volume of water will increase. The DEIR, page 55, states that "the total volume discharged to Larch Creek would increase by 6,300 cubic feet (cf) above existing conditions." The discussion further states that "the additional amount would be discharged to the creek following subsidence of the peak storm flows in the creek at the detention basin discharge location."

2-49 **Comment:** States that the amount of groundwater encountered would not be known until excavations are made.

Response: The exact volume of groundwater would not be known until excavations are made. However, based upon the limited occurrence of groundwater encountered in Engeo's exploration of the site, it appears unlikely that large quantities of groundwater would be encountered during corrective grading. Engeo anticipates that localized, low volumes of seepage will be encountered in the excavations. This volume of water can easily be accommodated by the recommended subdrain system. The commenter should refer to response 14-1 for a lengthier explanation of the drilling results.

2-50 **Comment:** Requests information regarding biological impacts upstream of the proposed storm drain discharge structure to Larch Creek.

Response: The portion of Larch Creek upstream of the detention basin outlet would not dry up sooner because there are other sources of runoff that would contribute flow to that portion of the creek. These sources include the following:

- The entire 51.8-acre watershed of Larch Creek uphill to the east of the end of Sanders Drive;
- The precipitation that would percolate into the ground and flow underground to the southern banks of the creek;
- Runoff from the area of the project site to the east of the developable portion of Lot 6;
- Runoff from the existing, developed lots on the north side of the creek; and
- The flow from impervious roof and pavement surfaces in the proposed project that would flow through the eleven vegetated swales where additional percolation would occur.

Larch Creek is an ephemeral creek that essentially has no flow during the dry summer and fall months of the year. There can be minimal creek flow and small pools of water or muddy places in the creek bottom during these months due to seepage from the creek banks or from adjoining residential irrigation, but the flow in the creek during these months is insignificant.

The applicant's Biological Resources report concludes that the section of Larch Creek on the north side of the project site provides marginal habitat for the adult California red-legged frog, but breeding habitat is not present. The project site is not included in a critical habitat unit for the red-legged frog as proposed by the U.S. Fish and Wildlife Service. There are no anadromous fish in this section of Larch Creek. The Biological Resources section of the Initial Study provided in Appendix C of the EIR, did not find any biological impacts that could not be mitigated to a less-than-significant level.

Development of the proposed project would involve obtaining approval from the United States Army Corps of Engineers, the San Francisco Bay Regional Water Quality Control Board, and the California Department of Fish and Game (DFG) regarding the impacts of the project on Larch Creek. A Streambed Alteration Agreement from DFG would be required for construction of the detention basin outlet structure and the bridge crossing. Additional mitigation measures may be placed on the project when the federal and state applications are reviewed. Therefore, the loss of a small portion of the creek flow upstream of the detention basin outlet would not have a significant impact on biological resources along the creek.

2-51 **Comment:** States that elimination of surface flow to Larch Creek upstream of the proposed storm drain discharge would create significant environmental impacts.

Response: See Response to Comment 2-50. The fact that there would be significant flow into Larch Creek upstream of the detention basin outlet following development of the project means that there would not be "far less" runoff in the upstream area of Larch Creek. As stated RTC 2-50, the Biological Resources section of the Initial Study did not find any biological impacts that could not be mitigated to a less-than-significant level.

2-52 **Comment:** Questions if there was agreement among all geologists involved in the proposed project regarding the supplemental geologic investigation, particularly the diameter and depth of the drill used.

Response: It should be noted that agreement among experts is not required to deem the EIR adequate. The California Environmental Quality Act, Section 15151, states that the disagreement among experts does not make an EIR inadequate. The courts have not looked for perfection, but for adequacy, completeness and a good faith effort at full disclosure. The statute indicates that an EIR should be prepared with a sufficient degree of analysis to provide decision-makers with sufficient information on environmental consequences to act on the project. For the proposed 6- Lot Subdivision, the environmental document includes the DEIR, along with the comments of interested parties (including comments of the nearby homeowners and

their geologic consultants regarding potential geologic hazards). It also includes the EIR's Response to Comments.

Prior to initiation of their supplemental subsurface exploration program in the fall of 2010, Engeo, Inc., held a field meeting with William Cotton (representing neighboring property owners), Darwin Myers (EIR Geologist), and Mitch Wolfe (Town's Peer Review Geologist) to review the exploration program details. William Cotton expressed a preference for down-hole logging (i.e., a large diameter boring that is entered by the geologist to observe exposures on the wall of the borehole). Engeo indicated a preference for continuous coring, because: (a) difficult access, (b) potential for shallow groundwater, and (c) relatively high cost of down-hole logging. Their review was that if good recovery of core was achieved, core borings could provide the detail sought by the Town Council when it directed that additional subsurface data be obtained and that a Focused EIR be prepared. Engeo also indicated that they would pursue down-hole logging if the borings failed to yield good core recovery. To provide data on the concern about possible deep-seated landsliding, the core borings were to extend 25 feet deeper than the deepest slide plane confirmed by Engeo during drilling (i.e., extend a minimum of 25 feet into in-place bedrock).

It should also be recognized that at the field meeting the planned location of some proposed borings and backhoe test pits were adjusted in response to comments of the various review geologists, and other boring/test pits were added. Wooden stakes were set at the locations that were agreed to ensure that the borings/test pits would be drilled at the agreed upon locations. Additionally, the review geologists were invited to observe field procedures during the subsurface exploration program, including viewing: (a) cores, and (b) exposed conditions in the walls of test pits and the exploratory trench. The fieldwork was performed during the period September 27 to October 1, 2010. Following the fieldwork, the core samples were laid out at the Engeo lab for close observation by the various review geologists. After viewing the core samples, William Cotton noted that some intervals of core showed evidence of shearing. However, similar features were observed in the walls of the exploratory trench, and those shears were clearly not within a landslide. They can be reasonably attributed to tight folding of massive claystone bedrock.

In summary, Engeo considered the exploration program adequate to test the hypothesis that the bedrock on the site may be involved in deep-seated landsliding. The core recovery is considered very good. Briefly summarized, Engeo observed no evidence of slickensides or other manifestations of landsliding within the bedrock cores. The deepest slide planes confirmed on the site by Engeo are approximately 18 to 20 feet below the ground surface. The landslide debris consists chiefly of very severely weathered, decomposed claystone bedrock with some minor sandstone. The borings confirmed that that the rock beneath the landslide deposits consists of weak claystone bedrock. Exposures in the walls of the exploratory trench indicate that bedding strikes approximately N40-60W, with dips to the south (into the hill) at 34 to 47 degrees. The wall of the test pits and exploratory trench indicate that the upper 2 to 3 feet of claystone bedrock is experiencing soil creep. The geologist for the EIR considers the core recovery adequate to evaluate landslide hazards on the site, and

considers the shears seen in the core to be similar to features seen in claystone bedrock throughout the Moraga–Orinda area.

Finally, the consultants retained by the neighboring homeowners are entitled to hold professional opinions on site conditions, but they are not shared by the peer reviewer for the EIR or the Town's Peer Review Geologist. The concerns of the geologists retained by the neighbors did influence the scope and direction of the landslide investigation. The project geotechnical engineers and geologists elected to evaluate landslide hazards using a dry core drilling method. This approach to exploration of the landslide is consistent with the prevailing Standard of Care for landslide investigations. As noted above, a concern expressed at the Town Council hearing by the neighbors and their consultants was the potential for a high water table on the site. In those circumstances, the dry coring technique employed by Engeo is superior to use of large diameter borings. (Where heavy flow of groundwater is entering a large diameter boring, there is the need to pump groundwater and control sloughing on the walls of the boring. These conditions can severely limit the amount of data gathered by the geologist entering the borehole. Conversely, the drilling method used by Engeo provides cores that can be examined in detail in the laboratory.) The Town's Peer Review Geologist has been reviewing Engeo's methods and their evaluation of the data gathered. The Town's Geologist finds that Engeo's evaluation is consistent with professional standards and is adequate for the purposes of processing the EIR and associated subdivision application. The Town's Geologist will be involved during review of the design level geotechnical report. That review will occur prior to recordation of the Final Subdivision Map. Representatives of the Public Works Department and the Town's Geologist will monitor the site throughout the grading process.

2-53 **Comment:** States that a deeper geological exploration is necessary.

Response: As the response to Comment 2-52 states, disagreement among experts is not required to deem the EIR adequate. The supplemental geotechnical investigation was performed by the applicant's geotechnical engineer in response to the direction of the Town Council. The scope of work included the logging of borings, test pits and exploratory trenches. Borings were extended 35 to 50 feet below the ground surface. In each case the borings were extended 30 feet below the depth of the deepest slide plane that was confirmed by the geotechnical engineer in the field during the field exploration program. For Borings EB-1 through EB-7, the geotechnical engineer used a track mounted drill rig to advance borings using 8-inch diameter hollow stem augers. Continuous samples were collected using a five-foot long dry core barrel. A table on page 3 of the Engeo report indicates that recovery ranged from 97 to 100 percent, with the exception of boring EB-7. That boring encountered a hard siliceous claystone bed from 30 to 35 feet below the ground surface that blocked the core barrel. As a result the recovery in EB-7 was 88 percent. Based on the findings of the supplemental exploration program, the Engeo report presents maps showing the configuration of the landslides. Along with original geologic map and corrective grading plans, the report presents cross-sections, which show a) existing topography, b) depth of basal slide plane, c) corrective grading of the slides/ limits of proposed earthwork, d) orientation of bedding, and e) location of the fault that was confirmed on the site. The geologists retained by the neighboring property owners believe that

another exploration method and perhaps deeper data would add significant new information on landslide hazards. However, the Town did not specify the drilling method to be used and there could be potential liability for the Town to select the details for the exploration techniques employed. CEQA Guidelines do not speak to the use of investigation techniques, and as noted in the response to comment 2-52, each drilling method has advantages and disadvantages. The Town's Peer Review Geologist was satisfied with the scope and direction of the exploration methods employed by Engeo, as was the geologist for the EIR.

It should be recognized that when the corrective grading plan is implemented, the project geologist would provide observation services to ensure that all landslide debris is removed. The project geologist will prepare a map of the exposed bedrock on the floor of the excavation to determine that the rock is not part of a slide. Typically, the geologist will look at the continuity of the rock as indicated by stratigraphic units, measure the orientation of bedding, and observe the weathering profile. If there is evidence that the rock is jumbled and/or disrupted, the grading contractor will be directed to go deeper until the project geologist confirms the presence of competent, in situ rock. In summary, there will be a great deal more data generated during grading to confirm and/or modify Engeo's preliminary interpretation that the maximum depth to competent bedrock is not more than 20 feet below the ground surface.

2-54 **Comment:** Asks how mitigation measures in the EIR will change if the 8-lot subdivision is approved.

Response: As indicated in Table 5-1 on page 5-12 of the EIR, the 8-lot subdivision would create less of an impact than the proposed project because less of the designated development area would be disturbed. Mitigation measures would remain the same as the number of improvements required, e.g., debris benches, detention basin etc. would not change. Fewer trees may be disturbed along the creek bank, however the mitigation measures recommending a tree replacement program would remain. Mitigation measures pertaining to structure height and design would also remain unchanged.

2-55 **Comment:** Questions who will perform the work described as part of the mitigation measures and what the applicants intend to have done before the entire property or portion thereof is sold.

Response: The questions raised in this comment are relevant to the project and do not address the adequacy of the EIR. These are details that are unknown at the time an EIR is prepared. When development is approved, the applicant submits improvement plans and final maps to the Town for review and approval. Experience has shown that typically mitigation measures are printed on the grading plans and or construction plans, or attached thereto. The applicant/builder is required to pull permits prior to the start of any work (e.g., grading, building of houses, etc.) and must show how the mitigation measures will be implemented.

2-56 **Comment:** Questions the sales price of the lots in the 8-lot subdivision alternative.

Response: The commenter does not raise any specific environmental issue relating to the adequacy or accuracy of the DEIR's coverage of environmental impacts requiring a response in this document under CEQA Guidelines 15088. The sales price for the lots is unknown and it is not in the environmental consultant's purview to estimate the sales price of the lots. There are site improvement costs, which remain the same for any of the alternatives studied, e.g., creek crossing, roadway, site grading, debris benches, drainage improvements, etc. As a result, the three-lot subdivision alternative would not be economically feasible because of the cost to improve the project site.

2-57 **Comment:** Questions the amount of property taxes anticipated for each of the 8 lots.

Response: The subject of property taxes generated by an 8-lot subdivision is not relevant for determining the adequacy of this EIR.

2-58 **Comment:** Questions the amount of anticipated costs to develop the property into three lots.

Response: Refer to the itemization of costs attached to Letter 17.

2-59 **Comment:** Questions the cost of maintaining the open space under the 3-lot alternative and how many feet the 8-lot subdivision is located from the Sanders Drive homeowner's property.

Response: The open space area is a separate parcel that is not owned by each homeowner. As shown on Figure 2-1, the open space is not included within the individual lot lines. As indicated in Mitigation Measure 3.2-6, it is implicit that a GHAD be formed which would include maintaining the open space area. It is reasonable to assume that if only three lots are granted, potential buyers may not be as interested in buying into the subdivision knowing that only three property owners would be responsible for maintaining 50+ acres. The open space area would not be useable to the homeowners for any other land uses (e.g., horse setups or vineyards) to help recoup their cost. The homeowners nonetheless would be responsible for the maintenance of the open space area, whether it is a 3-lot subdivision or an 11-lot subdivision.

The commenter should refer to Figure 5-1 which shows the 8-Lot Alternative subdivision overlain on the 6-lot subdivision. The development area is less but the figure shows where the lots would begin and end in relation to Sanders Drive residences.

2-60 **Comment:** Requests information regarding the volume of imported fill material that would be required to construct engineered fills.

Response: Properly moisture-conditioned and compacted, the landslide deposits are suitable for use as engineered fill. Consequently, slide debris will not be removed from the site, and there is no need to import fill material to implement the corrective grading plan. Truck trips to the site will be required to transport construction materials to the site (e.g., materials needed for construction of the proposed bridge, supplies needed for construction of subdrains, steel and concrete for construction of

drainage ditches, drainage pipes needed to implement the drainage plans, etc.). There would also be the daily commute trips of construction workers, and a fuel truck will make daily trips to the site. The weight of trucks, number of peak hour trips, etc., are not known at this time, but the traffic-related construction trips would be typical of a small subdivision project with a balanced approach to grading. It is not unusual for the Town of Moraga to require street sweeping of any material tracked onto off-site roads and a requirement to repair any haul road that is damaged by truck trips.

2-61 **Comment:** Requests information regarding potential damage to Sanders Drive due to construction truck traffic.

Response: Refer to the last sentence of Response to Comment 2-60.

Letter 3

Preserve Lamorinda Open Space
P.O. Box 6632
Moraga, CA 94556

March 22, 2011

Lori Salamack
Planning Director
Town of Moraga
329 Rheem Blvd.
Moraga, CA 94556

RE: Comments on Draft Environmental Impact Report for the Hetfield Estates Project

Dear Ms. Salamack:

Preserve Lamorinda Open Space is a local association of over 700 Lamorinda residents, including over 300 residents of Moraga, with a shared interest in open space and development issues in Lamorinda. We hereby submit the following comments with respect to the Hetfield Estates DEIR.

As the CEQA process up to this point has made clear, the proposed Hetfield site is geotechnically problematic for development. The Initial Study/Mitigated Negative Declaration explained that landslides "encompass nearly 100 percent of the lands proposed for grading and development." (IS/MND p. 3-31). Despite additional site exploration that has since been conducted as part of DEIR preparation, the environmental impacts of the project remain difficult to determine because the extent of grading , the landslide depths and necessary repairs, and long-term stability of the landscape are uncertain. The situation is further complicated by the presence of sensitive resources including wetlands, native grasslands, and a creek which must be crossed to access the proposed development area. Given these uncertainties, we ask that the Town consider and respond to the following concerns:

1. **The MOSO cell analysis requires further justification.**

The MOSO Cell Analysis (DEIR Figure 3.4-3) appears to include significant portions of land that are not within the "Grading Daylight Line" and not within the boundaries of any residential lot or development area. It is unclear why these undeveloped areas have been included for the purposes of calculating the overall slope of the development area. It leads one to wonder how the result of the average slope calculation would change if only those

3-1

areas being graded, lying within a residential lot, or otherwise developed were included in the calculation. Under MOSO, the applicant must show that the area to be developed does not exceed a slope of 20%. The applicant cannot arbitrarily include low-slope areas outside the development envelope in the calculation simply to bring down the overall average. As such, a compelling explanation is needed of why these undeveloped areas appear to have been included in the slope calculation, or the slope average must be recalculated based on the actual area to be developed.

3-1

2. The DEIR has not shown that the project area is not "high risk" and thus eligible for the proposed density increase.

When the draft IS/MND, CDP, and CUP were first to be heard by the Planning Commission in May 2008, the Planning Department staff prepared a staff report analyzing the property's high risk factors. The April 28, 2008 staff report prepared for the May 5, 2008 meeting listed MOSO's seven "high risk factors" and analyzed them one by one with respect to this property. The staff report then went on to conclude that:

> "According to the above analysis, factors c, e, f, and g do not result in a high risk determination for the property. **Factors a, b, and d, however do result in a high risk determination and can not be abated.** With respect to factor a, the geology of the site is such that there will continue to be long term exposure to landslides on the property and thus a deed disclosure and long term maintenance is required as CEQA mitigation. While this mitigation may be satisfactory for the purposes of CEQA (resulting in a less than significant impact), **it does not abate the hazards associated with the site's geology and thus a high risk determination is appropriate.**

3-2

> With respect to factor b, the property is crossed by an ephemeral (intermittent) drainage channel. **This factor can not be abated.** Nor can factor d, since the property contains a regular or intermittent spring or adverse ground water conditions. While some of the factors identified above lend themselves to abatement, others do not. **This property requires a high risk determination because its high risk factors can not be abated.**" [Staff Report, April 28, 2008, pp. 7-8, emphasis added]

Thus, the staff stated repeatedly and unequivocally in May 2008 that this property suffers from high risk factors that cannot be abated and therefore concluded that under MOSO it cannot lawfully be developed at a density exceeding 1 dwelling unit per 20 acres.

It is worth noting that staff reached this conclusion despite all the same geotechnical mitigation measures being proposed today, namely that "unstable soils shall be removed within graded areas. Buttressing, keying and installation of debris benches shall be provided in the transition areas between open space areas and development…" [IS/MND

p. 3-34] Such landslide mitigation measures were not, in staff's opinion, sufficient to relieve the site of its high risk classification.

Subsequently, the Town reversed its opinion, stating that the project had been "redesigned" to abate high-risk factors which it had previously determined could not be abated. In justifying this reversal in its October 1, 2008 staff report, staff cited the fact that residential lot lines were adjusted such that the upper portions of the landslides (along with the debris benches, buttress fills, etc. intended to stabilize those landslides) upslope of the proposed residences no longer lie within the residential lots, but rather just outside those lots' boundaries within a newly created open-space parcel.

This reasoning appears to suggest that deep-seated landslides and remediation structures perched above residential homes are unacceptably high-risk if they lie within a privately owned residential lot, but that those same deep-seated landslides and remediation structures are not high-risk if they lie just beyond the lot boundaries.

Clearly, however, redrawing lot lines does nothing to abate the geotechnical risks that the site's landslides pose to down-slope residences. Doing so may help shift liability for the landslides from individual homeowners to an HOA or GHAD responsible for the open space parcel, but it does nothing to reduce the physical risks to health and safety posed by building on the slides, or by the potential failure of the remediation measures intended to stabilize them. It does not change the fact that nearly every proposed residence is to be located on an active landslide area requiring remediation, nor does it reduce the quantity of grading or remediation required to construct houses on this problematic site. In short, redrawing lot lines does not alter the fact that landslides still "encompass nearly 100% of the areas proposed for grading and development." 3-2

The fact that the Town's planning staff first reached the conclusion that the land is "high risk" and said so unequivocally means that the DEIR now has a very high bar to reach to prove otherwise. But the DEIR's analysis of the most important "high risk" criterion (i.e., factor "a. whether the area has the potential to be adversely impacted by a landslide, unstable soil, soil with a history of slippage or a slope subject to severe surface erosion" MOSO Guidelines p. 5) does not provide any significant new information to change the Town staff's original conclusion. Whereas the Town originally determined that the first "high risk" factor could not be abated even accounting for all the remediation measures currently proposed, the DEIR simply concludes without explanation that these remediation measures are indeed adequate to do so. (DEIR pp. 3-70) Additional analysis is needed to explain precisely why the DEIR reached a different conclusion.

With respect to "high risk" factor b, ("b. whether the site serves as a natural drainage way or swale, with a drainage basin of 50 acres or more crossed by a perennial or ephemeral drainage channel) the DEIR focuses on the phrase requiring that the project site's drainage basin is less than 50 acres and states that "the project site's drainage basin is less than 50 acres" (DEIR p. 3-70) and concludes that factor b is satisfied on that basis. We have two 3-3

concerns regarding this approach. First, we would note that the MOSO Guidelines make no distinction between portions of the drainage basin lying within or outside the "project site." They simply ask whether the site serves as a drainage way with a watershed area of 50 acres or more. Second, there is no evidence in the DEIR supporting the claim that the watershed to Larch Creek is less than 50 acres. We ask that the Town provide a map depicting the boundaries and calculating the total watershed area (both inside and outside the project site) that serves the portion of Larch Creek that traverses the project site to better understand whether risk factor b is satisfied or not.

3-3

3. Additional information is needed describing wetlands impacts of the Preferred Alternative

In Appendix C to the DEIR, the "Checklist" states that the proposed project would require "filling and modification" to a minimum of 0.23 acres of wetlands [DEIR Appendix C, p. 21]. The checklist also makes clear that the full extent of wetlands impacts are uncertain, as is the potential for successful on-site mitigation. Page 21 explains:

> "Several aspects of the project could affect potential jurisdictional wetlands outside the limits of grading and development shown in the Conceptual Development Plan. Of particular concern is the possible landslide repair which may extend further upslope from the 'Grading Daylight Line', shown in the Conceptual Development Plan. It is difficult to predict the actual limits of grading necessary to rebuild and stabilize these landslide features, which could have major implications on wetland impacts, feasibility of on-site wetland mitigation, and extent of potential development, particularly on proposed Lot 6."

3-4

Of further concern is the fact that the proposed on-site mitigation wetlands are to be created "in an area of coalescing landslide deposits, which raises questions about the long-term stability of the created wetlands" [Ibid, p. 23].

These issues are obviously a significant concern which the Preferred Alternative attempts to address. While it appears that the Preferred Alternative would avoid many of the wetlands impacts associated with the proposed project, the DEIR needs to show this in greater detail by indicating specifically which, if any, wetlands would be impacted by the Preferred Alternative and their acreage. If mitigation would be required, the EIR also needs to show where on the site that mitigation would take place.

This information is necessary to determine the extent to which wetland impacts are reduced by the Preferred Alternative and whether the problem of recreating mitigation wetlands on unstable land has been eliminated or not. To that end, we ask that the Town provide a map of the Preferred Alternative showing its wetlands impacts (e.g. a grading footprint overlay on a map depicting the wetlands).

4. Additional information is needed regarding the grassland mitigation program

Both the proposed project and Preferred Alternative would eliminate approximately 0.5 acres of native grassland (DEIR, p. 5-6 and Appendix C, p. 20). Mitigation Measure IV-2 indicates that grassland mitigation measures will be incorporated into the "Wetland Mitigation Program" to offset this impact. Mitigation Measure IV-3a states that a "Wetland Mitigation Program" shall be prepared specifying performance criteria, long term management responsibilities, contingency measures, etc.

However, requiring future preparation of mitigation plan *subsequent* to the CEQA process does not provide enough information for the public to judge whether the mitigation will mitigate impacts to no significance *during* the CEQA process. We therefore reiterate our earlier comments on the IS/MND (Preserve Lamorinda Open Space comments dated May 22, 2008) that this approach constitutes "deferred mitigation" and is not consistent with CEQA. 3-5

Specifically, a draft mitigation plan for impacts to biological resources must be prepared as part of the CEQA process specifying how many acres of replacement grasslands will be created to offset the 0.5 acre loss; how many acres of existing native grassland will be salvaged, the target number of plants to be available for replanting, how long the salvaged plants will be held in a nursery, whether irrigation will be provided for the replanted areas and for how long, and what the performance criteria (e.g. percent native cover achieved and by when) will be applied to judge the success of the program, and what contingency measures will be required in the event that the results do not meet those criteria.

We would also point to the Palos Colorados and Rancho Laguna projects which the Town has approved in recent years. Both of those project applicants were required to prepare detailed wetlands and habitat mitigation plans *prior to certification of their EIRs*. We see no reason Hetfield Estates should be held to a different standard.

5. The Alternatives Analysis should provide greater detail regarding the Preferred Alternative and additional alternatives should be considered.

The Alternatives Analysis describes the Preferred Alternative and its benefits in general terms, but more specific information is needed to understand its potential advantages and the extent to which it has minimized environmental impacst. We ask that the EIR provide specific details—quantitative details where possible—describing how project impacts would be reduced in the Preferred Alternative. In particular, the EIR should provide an estimate of the approximate grading volume associated with the Preferred Alternative (both primary and remedial grading), and show specifically how wetlands impacts and wetland mitigation measures would change (see item #3 above). 3-6

To further illustrate the exceptionally problematic nature of the site and the need to consider additional alternatives, it is useful to compare its grading requirements to other recent developments approved in Moraga:

- The approved Palos Colorados 123-lot project is estimated to require total project grading (primary grading plus remedial grading) of approximately 1,200,000 cubic yards. For 123 lots, this comes to **~10,000 cy/house.**[1]

- The approved Rancho Laguna 27-lot project is estimated to require total project grading (primary plus remedial) of approximately 180,000 cubic yards[2]. For 27 lots, this comes to **~6,700 cy/house.**

- The Hetfield Estates proposed project is estimated to require total project grading (primary plus remedial) of approximately 180,000 cubic yards.[3] For 6 lots, this comes to **~30,000 cy/house.**

This simple comparison provides a dramatic illustration of the astronomical amount of grading associated with developing the Hetfield Estates site as proposed.

MOSO's stated purposes include "protecting the health and safety of the Town by **restricting development on steep or unstable slopes**." [MOSO Ordinance, Section 2.b., emphasis added.] It is very difficult to imagine that when Moraga residents drafted and adopted the MOSO ordinance 25 years ago with the goal of "restricting development on steep or unstable slopes" and limiting development on "high risk" land to 1 DU/20 acres, they intended to accommodate significantly higher density development on land so unstable that it required this level of remediation to do so.

3-6

Given this situation, we ask that the DEIR consider additional alternatives. While we understand that the applicant is allowed to carry out some development on this site, grading and development on unstable landslides should be kept to a minimum. The Preferred Alternative, while and improvement over the proposed project, does not appear to fully achieve that goal. Additionally, it is not clear why the EIR felt the need to increase the number of units to 8 in the Preferred Alternative. We ask that the EIR analyze a more compact alternative that would avoid not only the landslides on proposed lots 1 and 6, but also the landslide on proposed lot 5. By reducing the project footprint to the approximate area occupied by proposed lots 2, 3, and 4, a comparable project could be accommodated that further reduces the project's very excessive grading. Nearly all other project impacts would reduced by making the project more compact as well.

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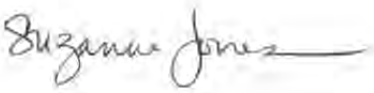
[1] This estimate is based my review of the site plan and on personal communication with Debi Chung, the project manager, on 3/22/11. However, Ms. Chung is in the process of preparing her own estimate for me which will be more accurate.

[2] This figure does not include grading associated with the repair of Rheem Blvd. which is a separate undertaking and not necessary for construction of the housing development.

[3] Personal communication with Lori Salamack, 3/14/11.

Thank you for your consideration of these comments.

Sincerely,



Suzanne Jones
On behalf of Preserve Lamorinda Open Space

LETTER
3
RESPONSE

Preserve Lamorinda Open Space
Suzanne Jones
March 22, 2011

3-1 **Comment:** States that the cell boundaries must precisely coincide with the Grading Daylight Line and not within boundaries of residential lots or development area. Questions why undeveloped areas have been included for purposes of calculating the overall slope of the development area. Must show that developed areas do not exceed a 20 percent slope and cannot arbitrarily include low-slope areas outside the development envelope in the calculation.

Response: The commenter implies that the cell boundaries must precisely coincide with the "Grading Daylight Line" which is erroneous; MOSO does not state this. It states that a cell containing a minimum of 10,000 square feet of area with an average slope of no more than 20 percent must be identified. This process identifies an area in which development may occur. It does not, however, state that one must use all of the "Developable Area" that is available.

3-2 **Comment:** The DEIR does not show that the project area is not high risk and eligible for the density increase. Commenter refers to earlier staff analysis which identified risk factors.

Response: The commenter references an April 28, 2008 Staff Report, wherein Staff indicates concerns regarding: (a) debris benches within the proposed development areas, (b) the drainage channel within the development area, and (c) an intermittent spring. Staff references General Plan Public Safety Policy 4.3, which states that the Town should "minimize the density of new development in areas prone to seismic and other geologic hazards."

This report was prepared for discussion purposes at a Planning Commission hearing. Neither the Planning Commission nor the Town Council made a decision or adopted findings based on the April 28, 2008 Staff Report, and the Town has therefore not "reversed" an earlier finding or decision on this specific issue.

Further analysis was undertaken under CEQA with the publication of a Mitigated Negative Declaration, dated September 30, 2008 (subsequently appealed). This document addressed the project's consistency with MOSO and evaluated the seven factors for determination of "high risk." The conclusion of the Mitigated Negative Declaration was that the proposed project "complies with the MOSO requirements."

In its subsequent Staff Report dated October 6, 2008, Staff explained its earlier concerns regarding "high risk" as stated in the April 28, 2008 Report and the specific project redesign and other factors under MOSO that addressed Staff's concerns.

Staff stated in its October 6, 2008 Report that with regard to the debris benches, the inclusion of the benches within the project lot lines (i.e., on residential lots) was

potentially an indication of soils instability/geologic hazards "*within the area of future development on such lots*." The project was redesigned and the lot lines were adjusted to exclude the debris benches from the lots—"*thus ensuring that the debris benches are outside areas proposed for development.*" This specifically addressed Staff's concerns regarding Public Safety Policy 4.3, which minimizes the density of new development in areas prone to hazards—the project application was amended to ensure no new development would be located in the areas of the debris benches.

With regard to the ephemeral (intermittent) drainage channel (Larch Creek), the applicant provided drainage calculations to determine the water surface elevations along Larch Creek during the 100-year, 12-hour storm event during existing, undeveloped conditions. The total area of the drainage basin contributing to the creek at the downstream end of the Hetfield Estates property is greater than 50 acres. However, staff determined that by pulling the lot lines (development) back from the creek channel that the project is not crossed by a perennial or ephemeral drainage channel. As shown in Figures 3.3-2 and 3.3-3 in the DEIR, the channel has sufficient capacity to accommodate storm run-off. The DEIR confirms that project plans provide for an underground and above-ground storm drain system with an underground detention basin that would attenuate flows into Larch Creek during peak storm periods. (See DEIR page 3-70.) The installation of these improvements ensures that there is no increase in the peak flow rate during these storm periods. The project plans have been further revised to exclude the drainage channel from each of the proposed lots, removing the drainage channel from the area of development.

With regard to the intermittent springs, the DEIR confirms that all springs are located within the open space area, and outside the area for proposed development. (See DEIR page 3-71.)

The project debris benches have been designed to prevent impacts to the development area. The project will not increase the peak flow rates into the drainage channel, which has more than sufficient capacity to preclude any possible project flooding in the event of a 100-year, 12-hour storm event. The intermittent spring outside Lot 1 will nevertheless have a sub-drain that will dewater the area and pipe any excess water to the nearby mitigation area.

Following the October 6, 2008 Report and the publication of the Mitigated Negative Declaration, the Council made no decision or findings on these issues. The Mitigated Negative Declaration was appealed to the Town Council who required the preparation of a Focused EIR, which would address four issues, including the project's consistency with MOSO and the "high risk" issues. (See DEIR page 1-1 and pages 3-69 through 3-71 for an analysis of the "high risk" issues.)

3-3 **Comment:** Questions the project's compliance with risk factor "b" regarding natural drainage way or swale with a drainage basin of 50 acres or more crossed by a perennial or ephemeral drainage channel. MOSO guidelines make no distinction between portions of drainage basin lying within or outside the project site. Also the EIR does not provide evidence supporting the claim that the watershed to Larch Creek is less than 50 acres. Requests a map depicting boundaries and calculating total watershed area that serves Larch Creek.

Response: The natural drainage is Larch Creek, which drains Sanders Ranch located to the east of the project site. In reviewing MOSO criteria item "b. whether it (the site) serves as a natural drainage way or swale with a drainage basin of 50 acres or more or crossed by a perennial or ephemeral (intermittent) drainage channel," the proposed lots have been plotted so that all drainages are outside areas proposed for development, including Larch Creek. (Refer to Response to Comment 3-2.) As shown in Figure 3.4-4, a drainage channel does not cross the area proposed for development and the proposed development does not serve as a drainage area or swale. It is noted that the EIR was in error regarding the size of the drainage basin that serves the project site. (Refer to correction in ERRATA.) The size of the drainage basin that flows into Larch Creek upstream (east end of the property) is 51.75 acres. However, this error does not impact the high-risk analysis because the cells for each of the proposed lots, which are each over 10,000 square feet, are located outside of the drainage basin and are not crossed by a drainage channel. Therefore, no development will be occurring within the drainage basin or any drainage channel, and the criteria for classifying a development as "high risk" under factor b are not met. The Town's Engineer has independently reviewed and confirmed the applicant's high-risk analysis. A map of the watershed is on file with the Town of Moraga Planning Department.

3-4 **Comment:** Requests additional information describing wetlands impacts of the preferred alternative.

Response: The mitigation measures identified on pages 23 and 24 of the Initial Study in Appendix C of the EIR identify the necessary steps to be taken in response to the potential problems associated with grading interfering with the location of the wetlands. As described in the Mitigation Monitoring and Reporting Program on page A-8 of the EIR, a final wetland mitigation plan must be completed and submitted prior to issuance of a grading permit. It is also noted that additional mitigations may be placed on the project by state and federal agencies that will require a complete revision to the wetland mitigation plan.

The 8-Lot Subdivision Alternative avoids the wetland areas completely. This alternative reduces the total graded area from 8.49 acres to 4.57 acres, an approximate 46 percent decrease. The reduction in disturbed area that would result from this alternative would reduce the project impacts on biological resources. The greatest reduction is the impact to wetland areas. The 8-Lot Subdivision Alternative would impact 0.04 acre of jurisdictional area as compared to 0.19 acre for the proposed project. This is a 0.15-acre decrease (approximately 80 percent). The remaining wetland areas impacted are small isolated features. The larger spring-fed seeps and ponds, which have greater biological value, are avoided. This change also reduces the amount of on-site wetland mitigation from 0.34 acre to less than 0.08 acre. This amount of wetland can be provided on site with a minimal amount of associated grading and does not require the terracing of the hillside to the east of Lot 6 as is required for the proposed project. The 8-Lot Subdivision Alternative would increase the setback from the ponds from approximately 20 feet to 240 and 300 feet, decreasing disturbance from development and thereby increasing wildlife use. Also this alternative subdivision would border a reduced portion of the creek (approximately 540 linear feet) providing greater accessibility to the riparian zone by

wildlife. Refer to Figure 5-1 of the EIR and Figure 3-5 in Appendix C for the location of the wetlands.

3-5 **Comment:** Requests additional information regarding grassland mitigation program and claims that the mitigation measures are considered deferred and not consistent with CEQA.

Response: The mitigation monitoring program in Appendix A of the EIR identifies the timing of when the landscaping plan is required. This plan must incorporate the salvage and replanting program that is required in Mitigation Measure IV-2. The following steps describe how the salvage and planting program will be undertaken.

The commenter references the difficulty of establishing native grasslands and the need for long-term monitoring and management of mitigation sites. This statement is correct if the target grassland is composed of native bunchgrasses and plant establishment is from seed. The native grassland program described below proposes neither of these approaches. The applicant's biologist proposes to re-establish the same species, creeping wildrye (*Leymus tritcoides*).

The project would result in the removal of an approximate one-half acre stand of creeping wildrye, which is a low growing, mat-forming rhizomatous grass. The species primarily reproduces by underground runners and can bind the soil into a strong turf which, when established, is erosion resistant. Cultivars of the species have been developing the species for the nursery trade. The wildrye is used to revegetate levee and riverbanks, stream banks, bioswales and seasonally wet areas. The species is easy to propagate due to its ability to reproduce vegetatively. The commercial use of this species indicates that it is not difficult to establish.

In accordance with the mitigation measure requiring the salvaging and reuse of creeping wildrye within the development area, the following provides detail on how this will be accomplished.

1. Prior to grading of areas supporting creeping wildrye, soil plugs approximately 2 inches by 2 inches in size containing wildrye roots and above-ground stems will be dug up for transfer to a nursery. A sufficient number of plugs will be collected to plant the perimeter of all wetland mitigation areas which were graded during wetland construction.

2. The wildrye plugs will be planted in nursery beds and maintained in these beds until needed for planting. They will be placed a minimum of 8 inches on center to allow rhizomes to establish new plants.

3. When wetland construction is complete, the plugs and new plants will be transplanted to the disturbed areas surrounding the new wetlands. The plants will be spaced 9 inches on-center. Planting will occur in early October. The plugs will be irrigated the day they are planted.

4. When plug planting is complete, a cover crop of California brome (*Bromus carinatus*) will be hydroseeded on all disturbed slopes surrounding the wetlands to provide erosion control while the wildrye is establishing.

5. Irrigation of the plugs will occur at one-week intervals until winter rains have fully wetted the soil (a storm of at least one inch). Irrigation during the winter will resume if no storm resulting in ½ inch of rainfall occurs for a three-week period. The plugs will then be irrigated at one-week intervals until a storm resulting in ½ inch of rainfall again occurs. At the end of the winter rainfall season, irrigation at two-week intervals will resume for the following late spring, summer, and into the fall until the soils become fully wetted by the fall rains. Irrigation will be stopped at this time.

6. The planting areas will be mowed after the California brome seed has matured (July or August) to a height of 4 to 6 inches to encourage the spread of the wildrye plants by underground runners (rhizomes). This will occur once in the first summer after planting.

7. The wildrye plantings will be monitored semi-annually for five years to determine the percent cover of wildrye. The plantings will be considered successful if creeping wildrye constitutes 50 percent of the plant cover within the planted areas at the end of the five-year monitoring period. Monitoring will consist of measuring the percent cover of the creeping wildrye at randomly located meter-square plots, with at least two plots at each wetland mitigation site.

8. The progress of the wildrye plantings toward meeting the success criteria will be evaluated at the end of the third year of monitoring. If the percent cover does not reach from 25 percent to 30 percent of the total plant cover by the end of year 3, additional plantings will be made within the designated planting areas. If no expansion of the original wildrye planting occurs at a planting site and the total percent cover of all plantings is less than 25 percent wildrye, additional planting locations will be selected which are within the open space parcel. These new locations will be held to the success criteria described above.

This is not considered deferred mitigation as the program to replant the grasses begins with the onset of grading and continues to the point when grading is complete and the grasses can be replanted. The planting and replacement program will be submitted to the Town as a part of the overall landscape plan, which is required prior to the onset of grading.

3-6 **Comment:** The preferred alternative should contain greater detail, including grading quantities.

Response: Information regarding the grading quantities for the Palos Colorados, Rancho Laguna and Hetfield Estates projects is acknowledged. The commenter is comparing the differences in total grading/lot and is also requesting information regarding the grading quantities for the 8-lot subdivision alternative. The following table compares the amounts of grading for excavation and compaction, remedial grading, the total amount and the total/lot for each project as well as the 8-lot alternative.

Development	Excavation & Compaction	Remedial Grading	Total Grading (cubic yards (c.y.))	Total Grading/ Lot (cubic yards (c.y.))
Palos Colorados (123 lots)			1,200,000 c.y.	9,756 c.y.
Rancho Laguna* (27 lots) Low end of range: High end of range:	 182,000 c.y. 182,000 c.y.	 176,000 c.y. 288,000 c.y.	 358,000 c.y. 470,000 c.y.	 13,259 c.y. 17,407 c.y.
Hetfield Estates (6 lots) (8 lots)	 29,550 c.y. 19,700 c.y.	 150,650 c.y. 76,924 c.y.	 180,200 c.y. 96,624 c.y.	 30,033 c.y. 12,078.c.y.

*Note: The Rancho Laguna values do not include remedial grading (another 80,000 c.y.) for the repair and stabilization of Rheem Boulevard.

It should be noted that all of the remedial grading at the Hetfield Estates project site is essentially a remove and replace operation. Once the repairs are completed the topography is fundamentally back up to original ground. Therefore, the basic excavation and compaction quantity is the real measure of how significantly a given proposal changes the topography or is sympathetic to it. The larger the quantity per lot, the more the proposed grading is required to modify the ground surface from its original configuration and the less sympathetic it is to the natural environment. The resulting analysis is as follows:

Development	Excavation & Compaction	Total Basic Grading / Lot
Rancho Laguna*	182,000 c.y.	6,740 c.y./lot
Hetfield Estates (6 lots) (8 lots – reduced grading)	 29,550 c.y. 19,700 c.y.	 4,925 c.y./lot 2,463 c.y./lot

The commenter requests that a 6-lot subdivision on a smaller development area be considered. Section 15126.6(a) of the CEQA Guidelines states that “an EIR need not consider every conceivable alternative to a project, but rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The DEIR considered two alternatives on "reduced project acreage," which generally encompasses the project area of project Lots 2, 3, 4 and 5. This allows discussion of smaller lots on reduced acreage, including the benefits of smaller lots (reduced grading and development area) versus the negatives (no repair of slides in areas of project Lots 1 and 6). If the development area for a six-lot alternative is smaller than the 8-lot alternative, lot size would be similar and house sizes would be more in keeping with the adjoining neighborhood. The reduction in daily trips and reductions in demands on public services/utilities and in daily vehicular trip in a 6-lot project versus an 8-lot alternative would be minimal. The 8-lot subdivision alternative avoids the wetland areas, whereas the six-lot subdivision would impact the wetlands . The commenter should compare Figure 2-1 and Figure 5.1 to confirm that the wetland areas would not be impacted by a 6-lot reduced acreage alternative.

The effects of an 8-Lot Alternative within a smaller development area are discussed on DEIR pages 5-2 through 5-6. Figure 5-1 illustrates how the 8-lot subdivision would be configured within the project area.