```
MACHINE
    EventTriggered_M
REFINES
    System_M
SEES
    EventTriggered_Ctx
VARIABLES
    t
    plantV
    ctrlV
    exec
INVARIANTS
    inv1   :   ctrlV ∈ RReal
    inv2   :   exec ∈ EXEC
    inv3   :   exec≠plant ⇒ dom(plantV)=Closed2Closed(Rzero, t)
    inv4   :   exec=plant ⇒ t∉ dom(plantV)
EVENTS
    INITIALISATION   ≙
      extended
    STATUS
      ordinary
    BEGIN
      act1   ;   t≔Rzero
      act2   ;   plantV ≔{Rzero↦plantV0}
      act3   :   ctrlV :∈ RReal
      act4   :   exec ≔ ctrl
    END

    Progress   ≙
    STATUS
      ordinary
    REFINES
      Progress
    ANY
      t1
    WHERE
      grd1   :   exec=prg
      grd2   :   t1 ∈ TIME ∧ (t ↦ t1 ∈ lt ∧ minus(t1↦t) ↦ sigma ∈ geq)
      grd3   :   ∀x· x∈ PROP ⇒
                   (ctrlV∉ prop_evade_values(x)⇒
                        (prop_evt_trig(x))(plantV(t)↦minus(t1↦t)↦ctrlV) = TRUE)
    THEN
      act1   :   t≔t1
      act2   :   exec ≔ plant
    END

    Plant   ≙
    STATUS
      ordinary
    REFINES
      Plant
    ANY
      plant1
    WHERE
      grd1   :   exec=plant
      grd2   :   plant1 ∈ Closed2Closed(Rzero, t)\dom(plantV) ⟶ RReal
      grd3   :   ode(f_evol_plantV(ctrlV),plant1(t),t) ∈ DE(RReal)
      grd4   :   Solvable(Closed2Closed(Rzero, t)\dom(plantV),
                          ode(f_evol_plantV(ctrlV),plant1(t),t))
      grd5   :   AppendSolutionBAP(ode(f_evol_plantV(ctrlV),plant1(t),t),
                 Closed2Closed(Rzero, t)\dom(plantV),
                 Closed2Closed(Rzero, t)\dom(plantV), plant1)
    WITH
      e    :    e = ode(f_evol_plantV(ctrlV),plant1(t),t)
    THEN
      act1   :   plantV≔plantV⩤plant1
      act2   :   exec≔ctrl
    END
```

```
  Ctrl   ≙
  STATUS
    ordinary
  ANY
    value
  WHERE
    grd1   :   exec = ctrl
    grd2   :   value∈RReal
               ∀x· x∈ PROP ⟹
    grd3   :     (value∉ prop_evade_values(x)
               ⟹(prop_safe(x))(plantV(t)↦value) = TRUE)
  THEN
    act1   :   ctrlV ≔value
    act2   :   exec ≔ prg
  END

END
```