

Town of Ayer

Open Space Residential Development

Regulations and Design Guidelines

Adopted June 14, 2022

I. Introduction

1. Purpose of these Regulations and Design Guidelines

The purpose of these OSRD Regulations and Design Guidelines are to supplement the Open Space Residential Development (OSRD) section of the Ayer Zoning Bylaw by:

- Describing the components of the Development Impact Statement (DIS) and Conservation Analysis (CA) as required under Section 10. 1.3 of the Ayer Zoning Bylaw.
- Clarifying the intent of the procedures and standards found in the OSRD section of the Ayer Zoning Bylaw, including the Conservation Analysis and the OSRD design process.
- Providing additional standards and guidance on matters that are not sufficiently detailed in the OSRD section of the Ayer Zoning Bylaw.
- Ensuring that OSRD subdivisions provide residents with high-quality neighborhoods in which to live by providing attractive and well-designed home sites and yards, access to high-quality natural areas in the permanently protected open space through the provision of walking trails and other amenities that facilitate enjoyment of such open space, and by providing guidance on the location and design of utilities such as stormwater management basins and the like.

2. Relationship to the Ayer Zoning Bylaw and Subdivision Regulations

These OSRD Regulations and Design Guidelines are adopted as an appendix to the Town of Ayer Subdivision Regulations as administered by the Ayer Planning Board. The Planning Board adopted these OSRD Regulations and Design Guidelines after a public hearing held on June 14, 2022, pursuant to the requirements of Massachusetts General Law Chapter 41, Section 81Q.

The Planning Board may waive any provisions or requirements of the Development Impact Statement (DIS) and Conservation Analysis (CA) dependent on the context and conditions of the site in relation to the proposed OSRD subdivision. Such waivers must be requested by the applicant at the time of application; these requests must articulate why the challenged provisions are irrelevant to the project, and/or why waiving the provisions better serves the interests of Ayer and its citizens.

3. Definitions

Baseline Monitoring Documentation: A critically important tool for ensuring that the terms of the Conservation Restriction (CR), legally imposed on the open space portion of an OSRD, are honored and enforced. This written record accurately portrays the conditions of the CR property as close to the date of its official recording as possible. The documentation then serves as the benchmark to assess changes to the site during annual monitoring visits by the holder of the CR for the purpose of determining whether changes are natural or whether they indicate violations of the terms of the CR that require that enforcement steps be taken. For the purpose of an OSRD Conservation Restriction, much of the data that goes into this documentation will have been collected during the preparation of the Conservation Analysis.

Building Envelope: The area of a tract proposed for OSRD subdivision within which roads, homes, utilities, stormwater basins, etc. are to be located. The building envelope should include all areas to be developed, constructed or that will be disturbed in the course of building out the subdivision.

Density Bonus: Additional dwelling unit(s) permitted at the discretion of the Planning Board when certain amenities such as affordable housing, additional open space and/or solar ready construction are provided in an OSRD subdivision. See section 10.1.5 of the Ayer Zoning Bylaw.

Concept Sketch: Informal plan showing potential open space conservation areas and building envelopes as an early step in designing an OSRD subdivision. It does not include such details as definitive street locations, house lots, driveways, etc.

Conservation Analysis (CA): Analysis initially performed by an applicant for an OSRD subdivision, and later reviewed for sufficiency by the Conservation Commission in order to make its recommendation to the Planning Board, which identifies priority areas for conservation / open space on a tract being developed. The CA is expected to accurately identify areas of high, medium and low priority for preservation as open space using the criteria found in these Regulations.

Conservation Restriction (CR): A binding legal document that provides permanent protection for open space land within identified bounds that must be approved by the Massachusetts Executive Office of Environmental Affairs (EOEA) and recorded at the appropriate Registry of Deeds. Details of a Conservation Restriction, including “reserved rights,” are negotiated between the owner of the land (which could be a homeowner’s association) and the holder of the CR (which could be a land trust, municipality, or other suitable organization). Upon its completion, the holder of the CR becomes responsible for annual monitoring and enforcement.

Conservation Values: Aspects of a tract of land that make it valuable from a conservation standpoint. Conservation values can include but are not limited to areas of exemplary biological diversity, both fauna and flora, water resources such as streams, ponds and wetlands, topographical features such as hilltops and views, unique geological features, and connectivity to other permanently protected conservation land.

Definitive Subdivision Plan: A Definitive Plan is a subdivision plan that meets the requirements of the Ayer Subdivision Regulations, Section VI, Definitive Plans, as well as the requirements of the MA Subdivision Control Law, Section 81O and all other applicable sections. It constitutes the final and binding record of the proposed subdivision, after approval and signing by the Planning Board and recording at the Middlesex County Registry of Deeds and or the MA Land Court, as well as the Ayer Town Clerk.

Development Impact Statement: a study of the impacts of a subdivision on aspects of municipal life including planning, traffic, school impacts, impacts to public safety, public utilities such as water and sewer demand, infrastructure, solid waste, etc.

Informal Meeting: A public meeting with the Planning Board and/or Conservation Commission to informally discuss aspects of an OSRD subdivision design prior to formal plans being submitted. More than one informal meeting can be held with either the Planning Board or Conservation Commission prior to submission of formal Preliminary or Definitive Subdivision Plans.

Mature Forests: Forested areas that have been allowed to develop undisturbed and naturally for a significant length of time, at least 50 years, without notable human disturbance (trails not included) that has altered the appearance of the landscape, topography, or ecosystem functionality. Mature forests display diverse species of trees with varying ages, heights and diameters; a multilayered canopy; standing or fallen dead trees; coarse woody debris on the forest floor; and provide important ecological benefits, including biodiversity, wildlife habitat, breeding grounds, and corridors.

Preliminary Subdivision Plan: A Preliminary Plan is a plan of a subdivision submitted as an OSRD under the provisions of Section VI of the Ayer Subdivision Regulations. Said Plan shall contain sufficient design detail to form a clear basis for consideration of and discussion by the Planning Board, with the intent of providing helpful advisory guidance to the applicant in the preparation of any future Definitive Plan submission.

Primary Conservation Areas: Areas that are subject to existing local, state and/or federal regulatory restrictions on development potential, including but not limited to wetlands, rivers and streams; buffer zones and riverfront; banks; floodplains; slopes exceeding 25% and soil susceptible to slumping.

Secondary Conservation Areas: Landscapes or elements of the landscape with environmental or cultural significance, including but not limited to upland buffers adjacent to wetlands, woodlands, farmland, meadows, wildlife habitat and corridors, historic and archaeological sites, mature trees, scenic views, unique geological features, and existing structures of historical significance.

Specimen Trees: For the purposes of these OSRD guidelines, trees that are identified by reviewing bodies as particularly impressive due to size, shape, age, or unique quality, including valuable species of trees less common to the area.

Undisturbed Land: Areas on a tract of land proposed for OSRD subdivision that have not been altered by human activity in the last 50 years as evidenced by vegetation or other natural indicators. In New England most undisturbed areas will be forested.

II. Overview of the steps in the OSRD subdivision application and design process

These OSRD Regulations and Design Guidelines describe **two processes** which are interrelated. **The first**, as listed below and illustrated in the flow chart, describes the *overall* OSRD subdivision application process from the first informal meetings with the Planning Board and Conservation Commission to the filing of a definitive subdivision application with the Planning Board.

The **second process** relates to the preparation of the Development Impact Statement, Conservation Analysis and OSRD design process, which comes under Steps two, three and four in the overall process listed below. This is more fully described in Section III. The OSRD Development Impact Statement and Conservation Analysis Process, below.

Overall OSRD Subdivision Application Process:

Step One: Applicant **informally meets with the Planning Board (PB)** to discuss OSRD process and conservation resources on the site (AZB section 10.1.3. B.1)

Step Two: The applicant prepares the **Conservation Analysis** and **Concept Sketch** and submits them to both the Conservation Commission and the PB (AZB section 10.1.3. B.3) See Section III below for details on the contents and process of the DIS and the CA.

Step Three: Applicant meets with the **Conservation Commission** who reviews the CA along with Concept Sketch. Conservation Commission schedules a site visit with the applicant.

Step Four: **Conservation Commission submits their recommendations** on priority areas for conservation to the Planning Board.

Step 4.5: **PB makes written conservation findings** and submits to the applicant as guidance in developing the Preliminary Subdivision Plan (AZB section 10.1.3 B.3)

Step Five: Applicant prepares and submits a **Preliminary Subdivision Plan, including the Development Impact Statement**, to the PB informed by the above. This Preliminary Plan shall follow the steps outlined in section III below. This is also the time to prepare a 'Yield Plan' per AZB section 10.1.4.

Step Six: Applicant prepares and submits a **Definitive Subdivision Plan** to the Planning Board.

III. The OSRD Development Impact Statement and Conservation Analysis Process

Development Impact Statement

1. Applicability: All subdivision applications proposing development of six (6) or more house lots shall include (X) copies of a Development Impact Statement (DIS) with their application package.

The Planning Board prefers that a DIS be submitted with the Preliminary Plan application, though in cases where the applicant skips that step and files a Definitive Plan, such DIS shall be submitted with application materials and plans for the Definitive Plan.

The DIS shall clearly assess the relationship of the proposed development to the natural and man-made environment of Ayer. This report shall be prepared by professionals qualified, experienced and, as applicable, licensed in their field of expertise.

Such professionals may include civil engineers, traffic engineers, architects, landscape architects, economists, land-use planners, hydrologists, biologists, environmental scientists, and public safety officials. The applicant shall bear the cost of this analysis.

2. Purpose: The DIS shall be used to inform the Planning Board in its deliberations, and as applicable the Conservation Commission and other pertinent Boards and Committees of the Town of Ayer.
3. Waivers: The Planning Board may waive, in whole or in part, any requirements contained in the DIS, which it deems inapplicable to the project proposal. The applicant should discuss the requirements of the DIS with the Planning Board prior to submission of the Preliminary or Definitive Subdivision application. Any waivers must be requested by the applicant at the time of application; these requests must articulate why the challenged provisions are irrelevant to the project, and/or why waiving the provisions better serves the interest of Ayer and its citizens.
4. Components of the Development Impact Statement: The DIS shall include sections on the 'planning,' 'man-made environment,' 'public services' and 'landscaping and aesthetics' as described below. Impacts to the natural environment are covered under the CA and/or Baseline Documentation for the Conservation Restriction. For each of the categories below, the DIS shall evaluate the following:
 - a. **Planning**:
 1. Compatibility of the proposed development with the goals and objectives of the Ayer Master Plan, with the purposes of the Ayer Zoning Bylaw, and other official planning and conservation documents that inform planning in the Town of Ayer.
 - b. **Man-Made Environment**:
 1. Existing land-uses: Compatibility with adjacent or nearby existing land-uses.
 2. Existing Design Context: Compatibility with nearby buildings that have distinctive siting, massing, materials, or other features reflecting a certain historic period or periods.

c. Public Services:

1. Schools: The expected impact on the school system, both elementary and secondary, including the number of students; projected school bus routing changes; and projections of future school building needs resulting from the subdivision.
2. Police: The expected impact on police services, time and manpower needed to protect the proposed subdivision.
3. Fire: Expected fire protection needs; on-site fire-fighting capabilities; on-site alarm or other warning devices; fire flow water needs, source and delivery system and other needs shall be presented. Fire department service improvements necessitated as a result of the proposed subdivision shall be discussed.
4. Recreation: On-site recreation provisions shall be detailed, and off-site recreation demands shall be estimated; playgrounds for children, provision for public open spaces, either dedicated to the Town of Ayer or available to its residents or employees shall also be described.
5. Water and Sewer: Water and sewer demand resulting from the proposed subdivision shall be estimated; as well as plans for facilities that may be required to ensure adequate water and sewer service to the proposed subdivision.
6. Solid Waste Disposal: Analysis of the projected volume and types of solid waste to be generated by the proposed development and methods of removal.

d. Landscaping and Aesthetics:

1. Landscaping: Provision for landscaping shall be described; including type, location, and function of existing site features including trees and vegetation, stone walls, potential street trees and other plantings and landscaping materials.

Conservation Analysis (CA)

The primary purpose of the CA is to provide enough detailed information for the Conservation Commission to make its recommendation to the Planning Board for which areas should comprise the minimum 50% of open space to be permanently protected by a Conservation Restriction in an OSRD subdivision. The CA helps the Commission determine those areas of primary or secondary conservation importance, requiring protection and/or contributing to the unique landscape character of a site, and that should be identified prior to the planning and determination of roadway, infrastructure, and dwelling locations. A sufficiently robust CA can also fill a secondary purpose by gathering much of the documentation that will be required for the preparation of a Conservation Restriction later in the OSRD process. A CA should also identify features that present obstacles that must be considered and overcome in the design of the subdivision.

The inventory of existing conditions shall include significant natural and human-made features of a site. Some of these will be natural areas protected by state and local laws, including Ayer's Local Wetland Protection Bylaw, such as floodplains, wetlands, buffer zones, river and stream banks, vernal pools, and river front areas. Other areas that are developable but contain certain features that lend character to the landscape should also be identified. Such areas could include a healthy stand of trees atop a rise in terrain; diverse woodlands; wildflower meadows; fallow farm fields; wildlife habitats; areas that afford good views; historic buildings or ruins; unique geological formations, and even lone specimen trees.

Other site features that must be accommodated in the design may include power line rights-of-way, transmission towers, utility easements, and drainage ways.

The elements of a (conservation) site analysis for the purposes of developing an OSRD subdivision would supplement and precede the site information normally required for detailed subdivision design. When the approval process moves on from the Preliminary Subdivision plan stage, complete documentation and analysis oriented toward proper engineering practices would then be needed. The OSRD layout would then be adjusted, if necessary, to accommodate engineering and/or regulatory considerations.

Submittal Requirements for Conservation Analysis

Conservation analyses done for the purpose of an OSRD subdivision will include mapping and field investigations and shall, at a minimum, consist of a map, or set of maps, showing the following:

1. A site context map. Existing physical conditions surrounding the development parcel within 500 feet. These can include such notes as "adjacent residential homes," "connection to trail networks" or "view to historic barn." The size and extent of existing adjacent open space areas shall be noted, as well as any further open space connections these spaces may have.
2. A topographic analysis identifying slopes at two (2) foot intervals. The topographic map should have a scale of one-inch equals 100 feet or more. Hilltops and ridge lines should be highlighted. Slopes in excess of 20% as specified in Section 10.1.4 A.1 of the Ayer Zoning Bylaw should be identified.
3. A delineation of soil types and identification of selected soil characteristics, as provided by the information in the regional soil survey completed by the U. S. Natural Resources Conservation Service. Such characteristics will include, for example, suitability of soils for crops, pasture, woodland, wildlife habitat, and recreation, as well as for building foundations, roadways, and sewage-disposal systems. Prime agricultural soils and alluvial floodplain soils shall be noted.
4. Boundaries of wetlands and buffer zones defined by Massachusetts Wetland Protection Act and Rivers Protection Act and certified by a Professional Wetlands Scientist (PWS).

5. A description of drainage patterns, including intermittent streams, potential vernal pools and certified vernal pools.
6. Land within an Area of Critical Environmental Concern (ACEC).
7. The most current FEMA 100-year and 500-year recurrence interval floodplain boundaries and elevations.
8. Areas delineated as "BioMap Core Habitat," "Priority Habitat for State-Protected Rare Species," or "Supporting Natural Landscape" on the Massachusetts BioMap II Project developed by the Massachusetts Natural Heritage and Endangered Species Program.
9. The extent of any Wellhead Protection Areas and Aquifer Recharge Areas.
10. An upland vegetation analysis identifying woodlands, specimen trees, and fields. Vegetation shall be identified as evergreen or deciduous. The health and condition of each vegetative type shall be identified. Predominant species in woodlands shall be identified. Specimen trees shall be identified by species, size (approximate full height and trunk diameter at 5 feet from the ground), and health. Unique or endangered plant species shall be noted.
11. Boundaries and characteristics of primary and secondary wildlife movement corridors, and isolated natural resource areas, as identified in adopted regional plans or local comprehensive plans.
12. Wildlife habitat, whether in fields, wetlands, or woodlands. Predominant species of birds, mammals, amphibians, reptiles, and fish shall be identified when possible. The presence of rare or endangered species shall be noted, along with the boundaries of natural areas and critical species habitat sites.
13. Scenic vistas, both into the site from adjacent roads, trails, and hilltops and outward from the site.
14. Existing streets and highways adjacent to the development parcel as well as desirable or undesirable points of entry into the parcel.
15. Future area-wide plans that may affect the physical layout of the site shall also be considered. These could include, among others, plans for future parks; open space, trail, and bikeway systems; agricultural preservation areas; arterial and other street networks; stormwater management facilities and other utilities; and general land use plans.

16. Other existing buildings and structures. Locations of existing wells and onsite sewage-disposal systems.
17. The location of cultural and historic features including, but not limited to, stonewalls, stone piles, fences, geological features, archaeological and historic sites and structures.
18. Identification and mapping of significant stands of invasive species.

1. Designation of Priority Preservation Areas

a. **Identify Primary Conservation Areas**

After determining the existing conditions on a site, the next step is to determine which areas should be preserved. Areas of primary and secondary priority for preservation shall be identified. Additional guidance on the layout of open space areas is found in Section IV. of this document below.

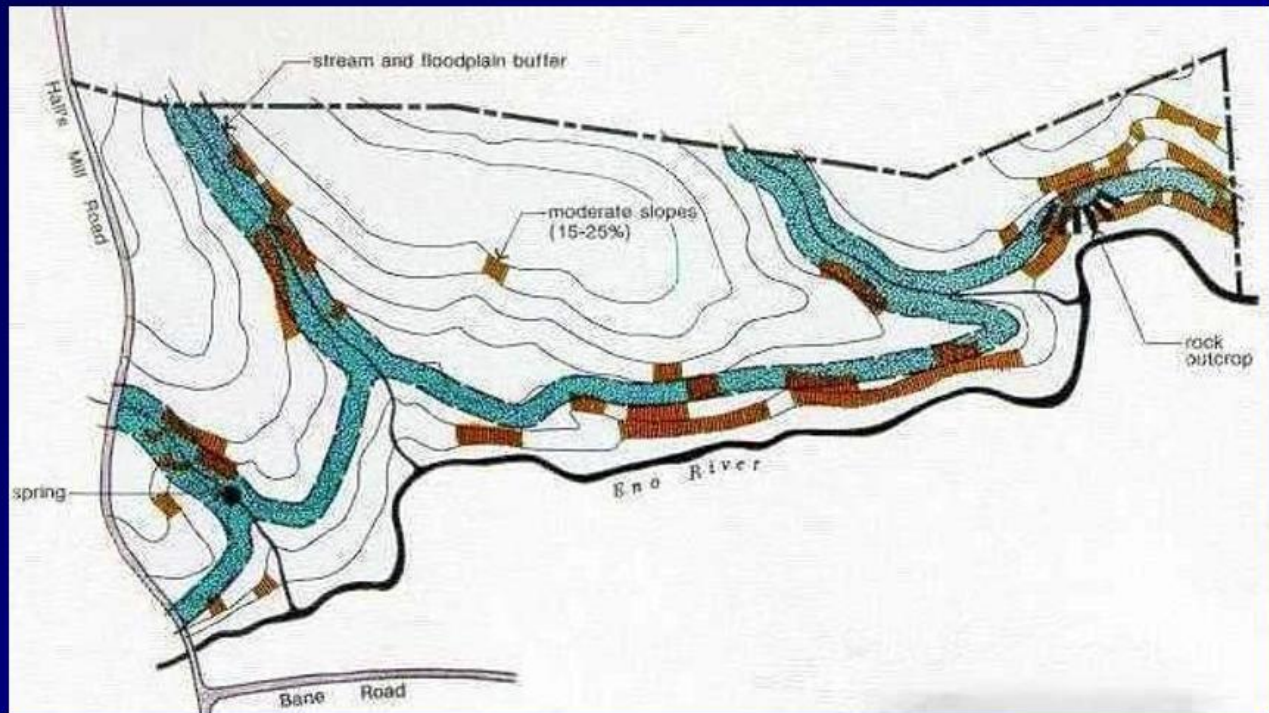
Primary conservation areas may include two types of areas: those protected through local, state and federal regulations, such as floodplains, wetlands, buffer zones and banks, and riverfront, and those connecting to larger municipal, county, or regional park and greenway systems, such as primary environmental corridors. The more that open space areas are connected, the more valuable they become.

Areas listed as being high on the '**Index of Ecological Integrity** (IEI) and identified as '**Important Wildlife Habitat**' through the UMASS Extension 'CAPS' Program, especially if within 'Areas of Critical Environmental Concern' (ACEC), should also be considered for designation as primary conservation areas. ('CAPS' stands for the Conservation Assessment and Prioritization System.) These locations can be found at <https://umasscaps.org>.

The concept of connectedness is particularly important when trying to preserve meaningful open space. Fragmented open space areas lead to disrupted wildlife migration paths, nonfunctional wildlife corridors, and piecemeal trail systems. Areas of disconnected open space preserved on a variety of development parcels, while valuable to some degree, do not have the same impact on preservation of ecological value as contiguous open space. When areas of open space in OSRD subdivision developments on adjacent parcels adjoin each other, the ecological value and landscape character of such open space is greater than if they are separated by development.

Conservation Subdivision Design

Identify Primary Conservation Areas



Source: Arendt et al: *Open Space Design Guidebook for the Albemarle-Pamlico Estuarine Region*, NC Assoc of County Commissioners, 1996.

b. Identify Secondary Conservation Areas

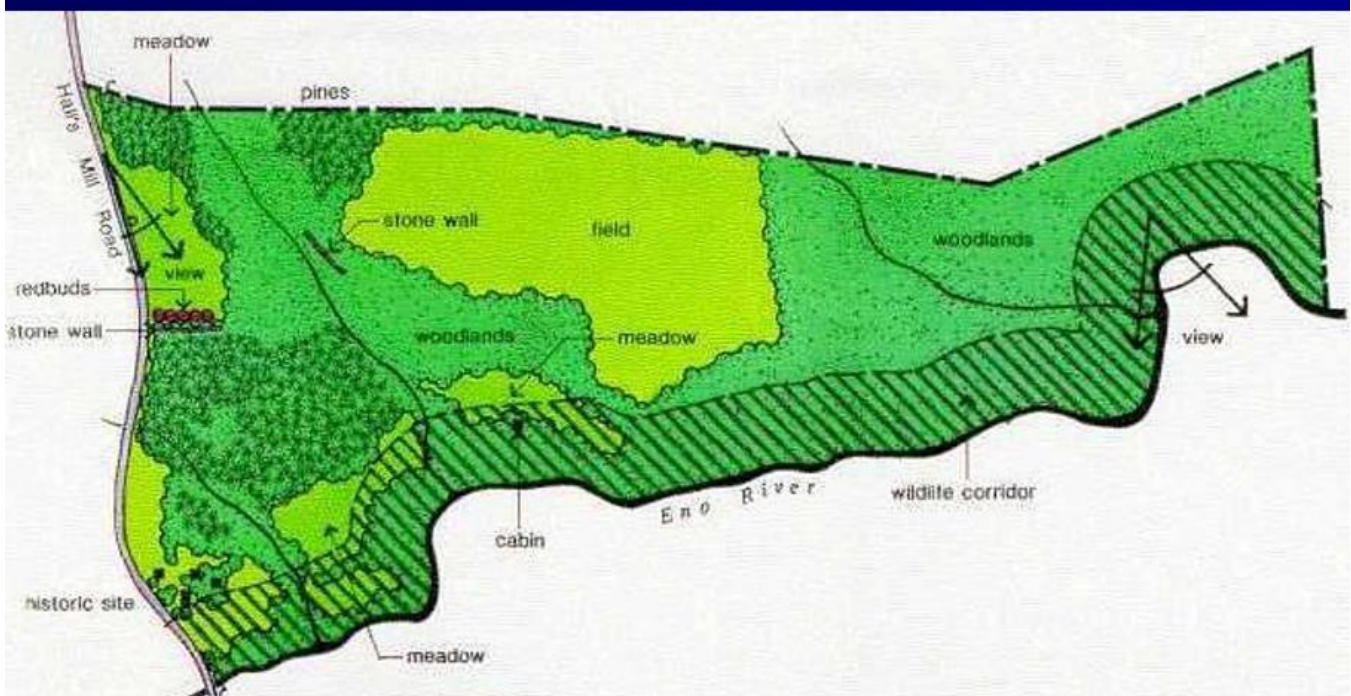
After designating first priority areas for preservation, regulated environmentally constrained areas and areas that provide connections to off-site open space, areas of second priority are identified. These would include other developable areas with natural features that have been identified as contributing to the ecological value and landscape character of the site, as seen from adjacent roads and other public ways, as well as from within the site. Decisions may need to be made at this stage as to the desirability of preserving certain areas.

Not all the open space land will be environmentally constrained, unbuildable or difficult to develop (i.e., wetlands or steep slopes). On parcels with few constraints, much of the open space will be in well-drained upland areas that would be considered buildable. Decisions will need to be made as to which portions of these areas should be used for lots and which should be saved for open space. These decisions should be based on the overriding objective of preserving ecological value and landscape character.

In the process of determining the priority preservation areas, the areas available for buildings, lots, and streets are, by default, also identified. These are the leftover areas. This process is the opposite of that used in the design of a conventional subdivision, where the leftover areas are the areas considered unsuitable for building.

Conservation Subdivision Design

Identify Secondary Conservation Areas



Source: Arendt et al: *Open Space Design Guidebook for the Albemarle-Pamlico Estuarine Region*, NC Assoc of County Commissioners, 1996.

2. Conservation Commission submits Recommendations to the Planning Board

After completing its review of the proposed site, the Conservation Commission will submit its recommendations on Primary and Secondary Conservation Areas to the Ayer Planning Board. The Planning Board will use the recommendations to deliberate and make findings that establish the areas to be designated as open space within the proposed OSRD subdivision.

3. Identify Location of House Lot Areas and Related Streets

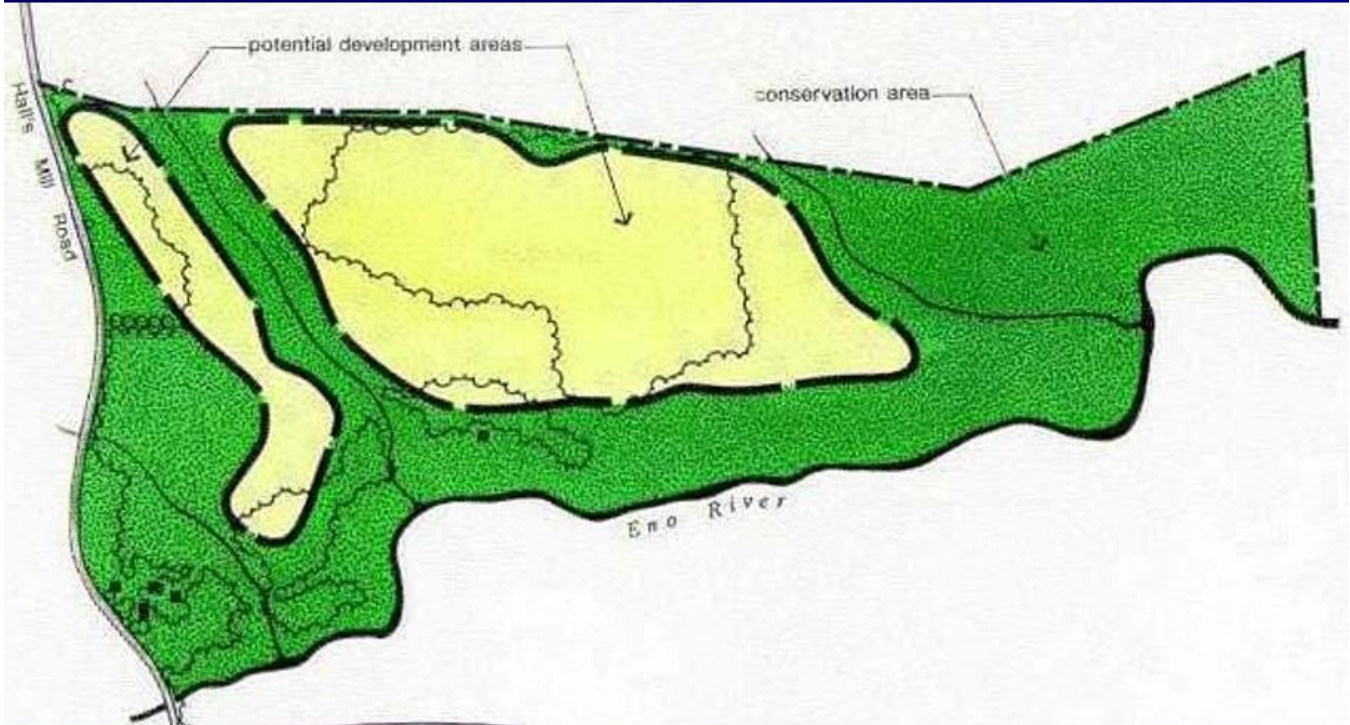
Once primary and secondary priority preservation areas are delineated, their outlines give shape to the subdivision building envelope or the area within which houses, and subdivision utilities are to be located. In addition to defining the rough perimeter of the housing lot area, the applicant will submit a conceptual sketch illustrating the location(s) of necessary streets.

The street and lot layout at this stage in the design process is conceptual only. Because of the large variety of street layouts that are possible through the flexibility permitted by OSRD subdivision practices, agreement on the general acceptability of a plan should be reached before the plan is more precisely defined.

While general municipal engineering principles should be followed, no detailed site engineering is done at this stage, although all zoning and subdivision regulations should be consulted to determine achievability of the proposed development concepts. It is beneficial for both the developer and the municipality to reach a consensus on a conceptual plan before the developer incurs the costs of preliminary engineering. The result of this process will be that houses and streets blend into the landscape in a natural way that protects the character of the site as seen within the site and from adjacent streets.

Conservation Subdivision Design

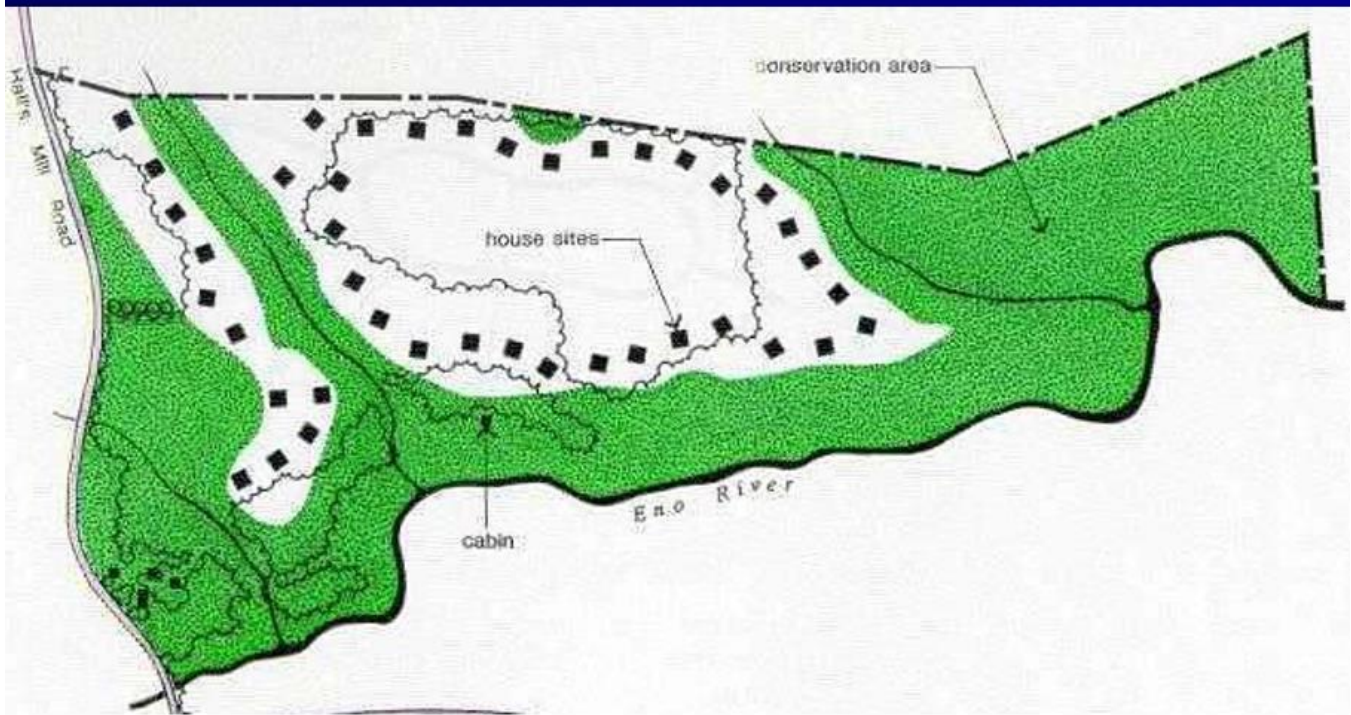
Identify Potential Areas for Development



Source: Arendt et al: *Open Space Design Guidebook for the Albemarle-Pamlico Estuarine Region*, NC Assoc of County Commissioners, 1996.

Conservation Subdivision Design

Locate Potential House Sites



Source: Arendt et al: *Open Space Design Guidebook for the Albemarle-Pamlico Estuarine Region*, NC Assoc of County Commissioners, 1996.

Conservation Subdivision Design

Lot Lines, Roads and Trails



4. Conservation Restriction

The OSRD bylaw states that designated open space is to be “preserved by a conservation restriction,” a legally binding agreement that must be approved by the Executive Office of Environmental Affairs (EOEA), and that provides permanent protection of open space in order to ensure the preservation of its conservation values.

A Conservation Restriction, subject to approval by the State, is a negotiated agreement between two parties. One party – usually a landowner or homeowners association – continues to ‘own’ the property, often retaining “reserved rights” for specific uses otherwise prohibited; the other party – usually a land trust, municipality, or other qualified organization – ‘holds’ the CR and assumes responsibility for annual monitoring in order to safeguard the conservation values, ensure compliance with the terms of the CR, and take enforcement actions where necessary in the event of violations. Once approved by EOEA, the Conservation Restriction is recorded in the chain of title of a property at the appropriate Registry of Deeds (Middlesex South for Ayer).

When a Conservation Restriction is submitted to the State for review, it includes a Baseline Documentation Report that accurately portrays the condition of the CR property as close as possible to the date of its recording at the Registry. This information is key as it then provides the comparison basis for subsequent annual monitoring and enforcement by the CR holder.

Since much of the information needed for this Documentation Report is required when the CR is submitted to the State for approval, it is suggested that OSRD applicants consider preparing an initial CA that is thorough and sufficiently robust enough to provide much of the required data. If not, applicants should be aware that they may have to revisit the site at a later date in order to fulfill this requirement.

When the applicant has submitted Definitive OSRD Subdivision plans to the Planning Board, the process of preparing the Conservation Restriction should begin. This includes the applicant's determination of who will remain or become the owner of the CR land, and the agreement of a second party to take on the eventual responsibilities of becoming the holder of the CR.

Some of the elements to be included in the Baseline Documentation Report will need to be contributed by the eventual CR holder, and these details, along with costs of annual monitoring, should be established in consultation with the Planning Board. Since bringing a CR from the negotiation stage to its acceptance by the State is a lengthy process, its preparation should begin as soon as possible.

IV. OSRD Design Guidelines

Pursuant to Section 10.1.7 C. 2 of the Ayer Zoning Bylaw, lot, roadway, and driveway layouts, land alterations, and placement of structures shall follow any design guidelines for OSRD which may be adopted by the Planning Board. These design guidelines are as follows:

Configuration and overall nature of the Open Space

1. Strips of common open space near house lots should be no less than 30 feet wide to both protect existing vegetation and provide a path for residents to access the larger open space in the subdivision.
2. Mature forests and areas of diverse vegetation should be placed in the open space, according to the standards of the OSRD design process.
3. Areas that have been identified as significant habitat for both fauna and flora shall be afforded the highest priority in laying out the open space.
4. Efforts shall be made to set aside open space with **low perimeter to area ratios**, meaning there is a significant amount of interior natural area compared to its edge. (*The perimeter of a shape is the measure of the length of a shape around its outermost extremities. The area of a shape is the amount of two-dimensional space that it covers. The ratio of the perimeter to the area of a shape is simply the perimeter divided by the area.*)

5. Land in a tract proposed for OSRD subdivision that borders or is close to land already in some form of permanent protection or in a Chapter 61 program is potentially of higher value as open space when compared to more isolated open space areas.
6. The following types of land covers should be considered of higher priority to be set aside as open space: **a.** agricultural land in active cultivation or easily available for cultivation, **b.** areas within an Aquifer Protection Overlay District, especially if in the Zone 1 or 2 areas of contribution to public or private wells, **c.** mature forests
7. Lot lines should be drawn to minimize the area of jurisdictional wetlands inside proposed building lots. The inner fifty (50) feet of wetland buffer zones should be located within protected open space rather than inside house lots.

Siting Principals

1. When space and the tract configuration permit, clusters of house lots should be separated by common open space to break up large expanses of disturbed areas, preserve existing vegetation and provide visual relief and interest for both residents and the public.
2. Minimize the clearing of vegetation at the edge of existing roads, clearing only as much as is necessary to create a subdivision or driveway entrance with adequate sight distance.
3. Minimize the crossing of steep slopes (15% +) with roads and driveways.
4. When building on such steeper slopes, take advantage of the topography by building multi-level structures with entrances on more than one level (e.g., walk-out basements, garages under buildings, etc.) rather than grading the entire site level. Use the flattest portions of the site for parking areas, the placement of lawns, rain gardens and landscaping.
5. Identify large trees (over 12" inches DBH) to retain in the early stages of laying out the subdivision. Lay out the road, driveways and utilities to preserve such large trees.
6. Preserve existing historic stone walls and other historic features on the site, locating them within proposed open space when feasible.

Flag Lots

1. Flag lots must meet the minimum required lot size of the underlying Zoning districts, except in the Residence A-1 district where flag lots must be at least 20,000 sq.ft. in area.
2. No more than two flag lots can be adjacent to each other.
3. Flag lots cannot use cul-de-sac turnarounds for required road frontage, they must be located along the length of the subdivision road(s).
4. Flag lots must have a minimum frontage of 30 feet.

Trails and Access to Open Space

1. Access to the open space (*except for narrow open space perimeter strips around homes*) shall be provided. Such access cannot be over private property.
2. Trails should be developed in consultation with the Ayer Planning Board and Ayer Conservation Commission.
3. Parking for trail access should be considered.

Powerline (and other) Easements and Open Space

1. Unless permitted by the Planning Board, the area within powerline and other public utility easements cannot be counted towards the minimum required percentage of open space in OSRD subdivisions.
2. When such powerline easements are relatively narrow and comprise less than 25% of the total area proposed as open space, the Planning Board may allow such land to be counted towards the minimum required open space when it FINDS that doing so is in the environmental and design interests of the OSRD subdivision being proposed.

Location of Stormwater Management basins and facilities

1. Stormwater basins (*detention and retention basins*) and related infrastructure cannot be located in open space areas that are needed to count towards the minimum 50% required open space per the OSRD provisions of the Ayer Zoning Bylaw. Stormwater basins and related infrastructure can be sited in 'extra' open space, provided that the extra open space was not used to earn density bonus units under Section 10.1.5 3. of the Ayer Zoning Bylaw, as that defeats the purpose of providing extra open space to begin with.
2. Interior areas of cul-de-sac bulbs should contain vegetation and/or rain gardens.

Off-site Improvements

1. As part of its responsibility to ensure that all new OSRD subdivisions minimize adverse effects on the town, the Ayer Planning Board is empowered to require that off-site improvements related to traffic and pedestrian safety, utilities, recreation, and other public needs be provided by the applicant so long as all such improvements have a 'rational nexus' to the impacts of such subdivision development on a part of town or the entire town.
2. Such off-site improvements will typically be negotiated during the Definitive Subdivision Review process, though discussion on such may begin during the Preliminary Plan stage.

V. Guidance on use of Density Bonuses

In section **10.1.5** of the Ayer Zoning Bylaw, **Density Bonus**, it states that the *“unit count determined in section 10.1.4 may be increased through density bonuses in order to advance important goals of the Ayer Master Plan, Ayer Open Space and Recreation Plan, or other planning document approved by the Planning Board and on file in the Planning Department. Density bonuses are given by Special Permit at the discretion of the Planning Board based upon the expected public benefit.”*

These ‘Open Space Residential Development Regulations and Design Guidelines’ are one such planning document and are adopted to provide guidance as to the process for granting density bonuses per section 10.1.5 of the Ayer Zoning Bylaw.

The Planning Board prefers that additional housing units beyond those derived through determination of the yield plan as described in Section 10.1.4 be provided through attached housing such as duplexes and multi-family units when allowed by the underlying zoning before the granting of any density bonuses for additional single-family homes.

Applicants desiring density bonus units must first demonstrate to the Planning Board that the same number of units cannot reasonably be provided through attached housing options such as duplexes and multi-family units before the Planning Board considers granting any additional such units through application of section 10.1.5 Density Bonus.