**Site Readiness**

**What is it?**
The evaluation of site readiness is necessary to identify aspects of the site that may affect a project outcome. The most sustainable and eco-friendly projects are projects that optimize the use of resources and limited impact on the environment. Therefore, projects that require fewer resources to leverage a specific site will generally perform better. This evaluation should include, but not be limited to:

- Verifying ownership of any property
- Developing an understanding of past uses and potential for hazardous conditions to be present
- Evaluating the project site characteristics in an effort to identify the potential to improve or detract from the performance of the project
- Confirming suitable routes of access for volunteers and delivery and staging of supplies
- Determining whether any activities are planned by other organizations for the project site that may negatively affect the project performance
- Identifying conditions that could compromise safety or performance of workers or users
- Evaluating long-term surrounding uses that may affect the project functionality
- Check on obtaining permits, DIGSAFE, local codes, and any zoning or other laws that pertain to an individual community. Liability is everyone’s concern and must be taken into consideration.

**Why is it important?**
Before resources are allocated to a service project, confirm the readiness of the service project site. If the project site has not been reviewed sufficiently, the project could encounter significant challenges during implementation and, as a result, be less likely to succeed. For a project to be successful and eco-friendly, the project team must do its homework in evaluating the readiness of the service project site.

**Who is involved?**
The project team and community affected by the project are responsible to ensure the project site is suitable for its intended use and represents a sustainable use of the community’s resources.
### Best Practice: Early evaluation and building on a site's past use

#### Tool: Confirm Acceptability of Planned Use

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<thead>
<tr>
<th>Definition</th>
<th>When to use</th>
<th>How it’s done</th>
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<tbody>
<tr>
<td>Confirming that site ownership, location, and type of use are all compatible with the intended project.</td>
<td>For projects that involve new construction.</td>
<td>This practice includes checking with applicable government agencies to ensure conformance with zoning and occupancy requirements.</td>
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#### Templates and Checklists
- Site Readiness Guidelines

#### Tool: Evaluate Past Site Uses and Materials

<table>
<thead>
<tr>
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<tr>
<td>Verifying historical uses and types of construction materials to confirm absence of hazardous conditions.</td>
<td>For projects that involve excavation or demolition. Evaluation of service project site readiness should occur as early as possible during the initial planning. If project site issues are identified early, they can often be resolved or minimized through project design.</td>
<td>If uncertainty remains relative to a facility condition and potential to create an unsafe condition, retain the services of a professional to perform a reconnaissance of the work area and provide an opinion on what protective measures are needed.</td>
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#### Templates and Checklists
- Site Readiness Evaluation Factors Checklist

#### Tool: Prepare Site Analysis

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<tr>
<td>Preparation of a detailed site plan that includes development and evaluation of alternative development methods in an effort to optimize project value.</td>
<td>For any construction project that involves new construction or renovation of existing facilities.</td>
<td>Site plan should include location and type of planned improvements, staging areas, delivery routes, adjacent uses, and identification of opportunities and constraints.</td>
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#### Templates and Checklists
- None
Site Readiness Guidelines

When evaluating the site readiness of a project, whether for an indoor or outdoor site, ask a range of questions to ensure the site is ready to support the project.

Consider the following questions as part of the evaluation of a candidate project site:

- What is the condition of the site? Is it ready for the project with minimal effort or are additional resources needed to prepare the site for the project?
- Are any permits needed for this project?
- For an indoor project, have you coordinated with the building staff so as to not impede their work effort?
- If site preparation is required before the actual project is implemented, who is doing the work and when?

As the project manager, you can clarify many issues and reduce potential redundancy by asking as many questions about the project site as soon as possible. This also enables you to maximize the project’s eco-friendliness. For volunteer projects, a broad range of project readiness conditions will be encountered. Ensuring all key site readiness issues are resolved prior to project implementation will make the project more effective, optimize volunteer time and effort, and minimize environmental impact. Below are potential conditions a team may encounter and methods that can be implemented to optimize volunteer efforts.

- **Ownership concerns** – If you or a supporting organization does not own the facility or area in which work is being performed, consider measures to address long-term feasibility of the project. Means of confirming ownership include checking the tax assessor’s office in the city or county where the project is located, or reviewing a recent title report on the property. If the organization using and/or modifying a facility is not the owner, obtaining written authorization/permission to modify the facility is mandatory. Otherwise, the improvements may be rendered unusable if a change in use or access is needed. The following written instruments are examples of binding vehicles to document right-of-access:
  - Permit from local building official (this includes a review of owner approval for improvements)
  - Attorney-reviewed agreement for right of use
  - Easement recorded at the local city or county tax assessor or similar office
  - A deed for facility or land possessed by the organization

The project team and/or supporting organizations may opt to require varying levels of assurance of the long-term ownership or accessibility to the project.

- **Past uses and potential for hazardous conditions** – Safety of volunteers and project users should be of the utmost importance to avoid liability for the project team and associated supporting organizations. Therefore, an investigation into the potential presence of hazardous conditions should be conducted early in the process of evaluating a project for site readiness. Hazardous conditions can include physical constituents that pose a threat to human health (either in the near or long term) and/or physical conditions that could pose a threat of injury. Below we discuss in more detail how hazardous conditions can affect a project.
  - **Physical Constituents** – Past uses of an area can leave behind chemical and other substances that, if not addressed, can pose immediate and long-term risks to volunteers and users. Examples include: asbestos, lead-based paint, universal wastes...
(mercury), elevated levels of metals, mold, and/or the presence of hydrocarbons (oil and grease) or volatile organic compounds (VOCs). The period/age of initial construction of a facility can often provide insight into the likelihood for hazardous materials to be present. Asbestos was used in a wide variety of building materials until the 1980’s and lead-based paint was the norm for many years until it’s residential use was banned in the late 1970’s. Similarly, past handling and/or disposal practices for hydrocarbons, paint, solvents, thinners, etc. resulted in these materials seeping into building concrete floor slabs and/or entering underlying soils. These constituents are assumed to not be an issue for new construction as current code and material/equipment supply sources should not introduce these conditions into a project.

- Physical Conditions – Facility or project components that can contribute to the potential for physical injury include (but are not limited to): fall potential, entrance/exit limitations, safety lighting and/or signage, ventilation, etc. A building official should review the existing facility and decide if there is a need to retro-fit to meet current code requirements. Although this review can often be fairly comprehensive, it typically is not intended to provide a complete review of a facility for code compliance. If a project modifies an existing facility, it is important that an evaluation of potential hazardous physical conditions be performed to limit liability to the project team and/or supporting organization. Similar evaluations should be made for new facilities projects.

- Site characteristics that impact project performance – As part of the project planning process, review the project with project volunteers and users to identify ways to improve the performance of the final project. Similarly, evaluate the project for characteristics that will limit the overall value. Examples of site actions that can be considered as part of project design or implementation planning include:

  - Integrating indoor project area cleaning/preparation with staging of materials
  - Isolating demolition areas from active staging/storage or work areas
  - Leveraging outdoor project flat site areas for staging or future project expansion
  - Using areas adjacent to a project site to plant vegetation for shade during warmer seasons and/or wind-break/open areas to obtain solar heat gain during colder months
  - Reducing site vegetation that will pose long-term sources of biomass/debris accumulation and affect maintenance costs
  - Routing access from nearest handicap-accessible parking spaces, etc.

Depending on the complexity of a project, a detailed evaluation of the site or project location can reveal significant opportunities to enhance its performance. Professionals can help identify simple ways to adapt a project the site/project area and dramatically improve its performance.

- Suitable access routes for volunteers and supplies – This aspect of project planning and execution, while self-evident, is often an issue on service projects. Taking the time to map out the route and locations for access, delivery, and staging/storage of volunteers and materials and looking for opportunities to improve the flow of materials and labor can greatly enhance the project implementation and reduce environmental impact.
• Other planned activities that may affect the project site or your ability to get volunteers –
Take the time for community outreach to advertise a planned volunteer project and solicit
input on project scope. Other activities may be planned for the site or area that could affect
the success of the project. Finding out early if other organizations or projects are planned can
also identify opportunities to work together for mutual benefit, either during implementation
or long-term operation. Similarly, if specific project components are in conflict or redundant,
the project team can modify the project definition or project timing accordingly to preserve
overall relevance and value.

• Conditions that could compromise safety and worker or user performance – Mitigation
measures can be developed for conditions that could negatively affect workers, or eventual
users of the area. These measures can include personal protective equipment (including
respiratory, eye and hearing protection, gloves, hard hats, steel toe boots, etc.), protection
from effects of heat and sun (sun screen, hats, clothing, shading and cooling devices,
hydration supplies, etc.), safe work areas, control of movement within the site, etc.
Equipment and supplies may need to be purchased to address these potential issues.

• Long-term surrounding uses that may affect the project functionality – Review surrounding
area uses in combination with the planned near- and long-term project activities during the
project planning process. Improvements, whether indoor or outdoor, and associated project
activities should be evaluated for compatibility with adjacent existing and planned uses. If
aspects of the project or surrounding uses indicate a potential for challenges, they can be
addressed during the planning process. Examples of non-compatibility may include:
  • Sound and light levels compromising planned activities
  • Blocking of views from/to adjacent properties
  • Proximity to publicly accessible areas near schools or day care facilities affecting
    security
  • Heavy commercial or light-industrial uses with high levels of delivery activities
    affecting ease of accessibility by users to the project site, etc.

Long-term issues with adjacent uses may require significant compromises relative to the
ability of a project to deliver value and may require substantial pre-implementation work to
address. These types of issues are sometimes hidden threats and should be considered prior
to planning the service project.

Addressing issues associated with site readiness is critical to reducing environmental impact and
project performance. The process of evaluating site readiness can be broken down into several
components and delegated across several groups. Team members performing this evaluation
should keep environmental impact in mind throughout the process. If sufficient documentation is
not available for the higher liability project components, including disposition of ownership,
presence of hazardous materials, safety of workers and users, etc., consider retaining professional
assistance to ensure competency of associated planning. The cost associated with professional
help is a very good investment and fees associated with obtaining this input usually pay for
themselves in protection of the team. Leveraging a robust team and referencing available case
study or Web-based references is advisable for implementation and design aspects of site
readiness to ensure a project with a sustainable life cycle and a low environmental impact.
Site Readiness Evaluation Factors Checklist

The service project site should be evaluated as part of the planning process well in advance of the project implementation to ensure a successful project outcome. Several considerations should be included in the service project planning as outlined below. As you review and complete each evaluation area, check it off the list.

- **Indoor Projects**
  - Clean site or complete preparation work prior to project day.
  - Evaluate timing and location of supply delivery for accessibility.
  - Verify there is sufficient storage space for project supplies and that they will not adversely affect other users.
  - Coordinate access into the facility several hours early on the day of the project.
  - Confirm the design for improvements will work with the project location.
  - Evaluate how the space will be organized so that volunteers can perform the work effectively and efficiently and reduce waste (e.g., make recycling and/or reuse of supplies easy).
  - Verify methods of ventilation and other worker safety components are sufficient for a safe work environment.

- **Outdoor Projects**
  - Confirm site ownership and zoning support and obtained permits.
  - Determine that site is clear of utilities or other subsurface impediments. To find out what utilities are in an area where you are digging, call 811 on any phone or visit www.Call811.com.
  - Evaluate soil conditions and found them appropriate for intended use, including presence of contaminants and geotechnical structural properties.
  - Map surrounding area drainage and ensured that storm water runoff will be appropriately routed around or retained on the project site, and consulted with storm water management district regarding Best Management Practices.
  - Address erosion control for the project build, both on a temporary and permanent basis via re-vegetation or other method of soil stabilization.
  - Ensure any trees in close proximity to the project site are in stable condition and any branches or roots are protected from damage.
  - Evaluate whether grading is required and if soil will be produced by the project; how it will be handled, transported, and permanently located and/or removed from the site; and whether the community can reuse.
  - Verify safe work zones can be implemented to separate workers from equipment.
Checklist for Existing Conditions

- Who owns the land?
- Is it currently maintained? How will it be maintained in the future?
- What type of access (surrounding roads, bike paths, walking trails) does the location have?
- Are there crosswalks leading up to the site?
- Is the location handicap accessible? If not, can this access be added?
- How visible is the location to passersby? What type of signage will be needed to enhance visibility?
- Is there good drainage in the location? Where do puddles form when it rains?
- Are there trees and other providers of natural shade in the area?
- Is there plant life or debris that will need to be cleared before a project can begin?
- Is there a concrete or asphalt surface that can be maintained as part of the project?
- Are there any other features that can become aspects of the project?
- Contact the one call center at Miss Utility or Dig Safe to be sure you know where underground facilities are located.
- Obtain the necessary state, city and local permits before embarking on your project.
Boston Schoolyard Initiative

**Benchmark:**  
Site Readiness

**Project Type:**  
School Yard Landscaping

**Organization:**  
Boston Schoolyard Funder Collaboration

**Project Location:**  
Boston, MA

**Summary:** The Boston Schoolyard Initiative (BSI) is a model for promoting community-driven eco-friendly development, environmental stewardship, responsible public policy, and outdoor experiential education in Boston Public Schools (BPS).  
1. The Boston Schoolyard Funders Collaborative uses an inclusive community design process to choose the best eco-friendly volunteer projects and to instill a sense of community ownership.  
2. Eco-friendly maintenance is considered during development.  

**Tools Used:**  
1. Meeting with designers and community to discuss the project use compatibility.  
2. Choosing eco-friendly designs that build on the site’s past use by incorporating in existing cement structures and green spaces.  
3. Developing plans to perform the most eco-friendly form of maintenance.

**Project Impact:** When choosing an eco-friendly site, BSI schedules a series of meetings with the landscape architect to build their design vision, which involves evaluating the potential site and what its use will be. Then a master plan for the schoolyard is drawn up for public bid. Maintenance and the eco-friendliness of the site are carefully considered during this phase. The designers and volunteers who will serve as maintenance staff will work together on improving the site, planning staging areas, and evaluating the strengths and weaknesses of the site. The eco-friendliness of the schoolyard will depend upon the sense of stewardship developed along the way and the implementation of ongoing programming to make the schoolyard a dynamic asset to the school and community.
**Summary:** This preeminent sea mammal care facility, located in a National Park, was founded over 30 years ago and was housed in outdated facilities, including several shipping containers. The site afforded ample space for expansion and benefited from integration of sustainable site features.

1. Low-impact drainage features to treat storm water runoff
2. Pervious concrete parking areas to reduce runoff volumes
3. Integration of renewable energy generation
4. On-site treatment of animal pen water

**Tools Used:**
1. Detailed site analysis, including evaluation of site soils, slopes, and surrounding vegetation to evaluate existing site conditions and to identify opportunities to integrate low-impact drainage features.
2. Evaluated program needs for opportunities to integrate renewable energy and water treatment features on the site.
3. Integrated erosion control measures during construction and use of best management practices to treat storm water runoff on a permanent basis.

**Project Impact:** This unique animal hospital and care facility is being expanded to over five times the life support system tank volume, but will actually discharge less wastewater than under existing conditions. Further, use of solar photo-voltaic panels will reduce the energy demand of the facility and serve as a shading feature for the outdoor animal pens. Staff will be able to care for significantly more sea animals than in the existing facility. Due to funding limitations, the project has been leveraging volunteers for care, contributions of material and labor from local businesses, and professional services.
Resources

- LEED 2009 for Existing Buildings:
  - Provides guidance on sustainable operations for existing buildings that
    may be useful for an indoor project.

- LEED 2009 for Commercial Interiors:
  - Provides information related to sustainable approaches to building
    interiors that may be useful in evaluating a building’s readiness and/or
    opportunities to enhance overall sustainability of the facility.

- LEED 2009 for New Construction and Major Renovations:
  - For new construction building, major renovations, and outdoor sustainable
    site projects, this guide provides a good overview of the elements of the
    project that can affect sustainability.

- Creating Sustainable Communities –A Guide for Developers and Communities:
  http://nj.gov/dep/opsc/sdtguide.html
  - New Jersey’s Department of Environmental Protection is a national leader
    in the stewardship of natural resources, they preserve the ecological
    integrity of the Garden State and maintain and transform places into
    healthy, sustainable communities.

- Smart Growth Online-Sharing:
  - Resources on how communities are making Smart Growth work in their
    community:

- Sustainable Site Development Checklist:
  http://www.penrithcity.nsw.gov.au/uploadedFiles/Website/Planning_&_Developmen
t/Our_City_Centres/SustainableDevelopmentChecklist.pdf
  - The Checklist includes retail, commercial, and medium density residential
    developments, encompassing new buildings, alterations and additions, and
    fit-outs.

- Sustainable Site Development Checklist:
  http://www.southampton.gov.uk/Images/0E%20Appendix%20F%20Checklist_tcm4
  6-178903.pdf
  - This checklist includes sections for: energy, waste, transport, materials,
    water, culture and heritage, and natural habitats and nature conservation.

- Check List for Sustainable Design:
  http://www.seattle.gov/DPD/cms/groups/pan/@pan/@sustainableblding/documents/
  web_informational/dpds_007169.pdf
  - Sustainable design principles affect all phases of project development,
    from design, construction, operations and maintenance, and demolition
    and disposal. Use this checklist as a starting point for sustainable design.

- Checking for utilities at the site: www.call811.com
• Building a deck? Planting a tree? Installing a mailbox? 811 is the number you should call before you begin any digging project.

• How to Use a Soil Test: www.vabf.org/soilre3.php
  o Information about soil testing.

• Understanding the Numbers on Your Soil Test Report:
  www.uaex.edu:80/Other_Areas/publications/PDF/FSA-2118.pdf
  o Explains how to read a soil test report.