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23010-04 Isles of Scilly

St Mary's Community Hospital, Isles of Scilly, Proposed Integrated Health and Social Care Facility.

Construction Waste Strategy

January 2024

Version 1.0

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Document History

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1.0 Introduction

Effective waste management is fundamental to sustainable construction practices, aligning with the commitment to environmental responsibility and regulatory compliance. Any Site Waste Management Plan (SWMP) for the proposed Integrated Health and Social Care Facility should serve as a strategic blueprint to systematically manage, control, and minimise construction waste generated during the project's lifecycle.

A Principal Contractor is yet to be appointed for the project so the full construction methodology, waste protocols and waste estimates can only be confirmed once a Principal Contractor has been appointed.

All contractors waste will be handled in accordance with the Council of the Isles of Scilly and Cornwall NHS Foundation Trust waste management policies. Statutory industry standard will also be complied with. The unique challenges of disposing of waste on the Isles of Scillies are recognised and all designs and plans will be configured to reduce waste as much as possible. Once the principal contractor has been appointed further detail on their Site Waste Management Plan will be provided.

The detailed access arrangements for construction traffic have also not yet been confirmed.

Notwithstanding the above this document outlines some of the approaches, objectives, and procedures that will be employed to ensure responsible waste management throughout the construction process.

2.0 Waste Stream Identification

The construction project will generate various waste streams, each requiring specific management practices to ensure environmental responsibility and regulatory compliance. These key waste streams include:

Excavated soil and earthworks:

Description: Soil and earth materials removed during excavation and groundwork activities.

Management: Reuse on-site, if possible, or arrange for responsible disposal at authorised facilities.

Concrete and Masonry waste:

Description: Broken concrete, bricks, and masonry materials from demolition or construction activities.

Management: Recycle as aggregate for new construction or dispose of responsibly in designated facilities.

Wood and Timber waste:

Description: Scrap wood, pallets, and timber from construction and packaging materials.

Management: Recycle for reuse or process for biomass energy. Ensure proper disposal if recycling is not feasible.

Metal waste:

Description: Scrap metal, steel, and other metal components generated during construction or demolition.

Management: Recycle at metal recycling facilities. Salvage valuable metals for reuse.

Plasterboard Waste:

Description: Gypsum-based plasterboard or drywall waste.

Management: Segregate from other waste streams and dispose of in dedicated recycling facilities.

Packaging waste:

Description: Packaging materials such as cardboard, plastic, and foam used for materials and equipment.

Management: Segregate and recycle materials wherever possible. Dispose of non-recyclables responsibly.

Asphalt and bitumen waste:

Description: Waste generated from asphalt and bitumen materials during roadwork or paving activities.

Management: Recycle for use in new asphalt mixes or dispose of in designated facilities.

Hazardous waste:

Description: Materials containing hazardous substances, including paint, adhesives, and certain construction chemicals.

Management: Handle and dispose of hazardous waste in compliance with relevant regulations. Use licensed hazardous waste disposal services.

Insulation materials:

Description: Waste insulation materials, such as fiberglass or foam board.

Management: Segregate and dispose of in designated facilities, ensuring proper recycling where feasible.

Roofing materials:

Description: Waste generated from roofing activities, including old roofing materials, tiles, and membranes.

Management: Recycle roofing materials where possible. Dispose of non-recyclables responsibly.

Paint and coatings waste:

Description: Waste generated from unused or leftover paints, coatings, and related products.

Management: Dispose of in accordance with hazardous waste regulations or donate unused paint to community projects.

Electric and electronic waste:

Description: Discarded electrical and electronic equipment from construction activities.

Management: Separate and recycle through designated facilities. Comply with regulations governing electronic waste disposal.

Glass waste:

Description: Waste glass from construction or demolition activities.

Management: Recycle glass materials through designated facilities. Ensure proper containment and transportation.

Mixed general waste:

Description: Non-recyclable waste that does not fall into specific categories.

Management: Dispose of responsibly in accordance with waste management regulations. Minimise the volume of mixed general waste through segregation efforts.

3.0 Waste Stream Minimisation Objectives and Strategies

Waste minimisation objectives and strategies associated with the construction process on the project will aim to reduce the environmental impact of construction activities, conserve resources, and comply with waste management regulations. By the principal contractor adopting proactive strategies and incorporating waste reduction measures, the construction project can significantly reduce the environmental impact and contribute to resource conservation.

The following key objectives and strategies will be considered by the principal contractor when appointed:

Overall waste reduction:

Objective: Minimise the overall volume of waste generated during the construction project.

Action: Implement strategies to optimise processes, reduce inefficiencies, and carefully manage materials to prevent overordering.

Impact: Encompasses environmental, economic, and social benefits, contributes to sustainable construction practices, and aligns with goals of resource conservation.

Prefabricated and modular construction:

Objective: Minimise the overall volume of construction waste, packaging reduction, and design for efficient material use.

Strategy: Embrace off-site prefabrication and modular construction methods to minimise on-site waste generation.

Impact: Reduces on-site construction waste, as components are manufactured off-site with greater precision and efficiency.

Reuse of materials:

Objective: Promote and prioritise the reuse of salvaged materials or components from demolition activities in the new construction project.

Action: Identify opportunities where possible to incorporate reclaimed materials into the current project and implement design principles that facilitate material reuse.

Impact: Extends the lifespan of materials, reducing the demand for new resources and minimising waste generation.

Recycling targets:

Objective: Achieve high recycling rates for construction waste.

Action: Set specific targets for recycling various waste streams such as concrete, metal, wood, and packaging. Collaborate with recycling facilities and monitor progress.

Impact: Diverts materials from landfills, promotes a circular economy, and conserves natural resources.

Waste segregation:

Objective: Implement effective waste segregation practices to separate different types of waste at the source.

Action: Provide color-coded bins and containers for different waste streams, educate workers on segregation practices, and regularly monitor compliance.

Impact: Facilitates recycling efforts and ensures that specific waste streams, such as hazardous materials, are handled appropriately.

Reducing hazardous waste:

Objective: Minimise the generation of hazardous waste and ensure its safe disposal.

Action: Identify and replace hazardous materials with safer alternatives, train operatives on proper handling, and implement measures to prevent spills or accidents.

Impact: Addresses environmental, health and safety, economic, and regulatory aspects, minimises negative impacts on both the environment and human health.

Lean construction practices:

Objective: Apply lean construction principles to optimise processes and minimise waste.

Action: Streamline construction activities, eliminate unnecessary steps, and identify areas for process improvement to enhance overall efficiency.

Impact: Enhances overall project efficiency, decreases the likelihood of errors, and reduces the generation of waste.

Packaging reduction:

Objective: Minimise packaging waste associated with construction materials.

Action: Work with suppliers to reduce excessive packaging, encourage the return or recycling of packaging materials, and explore alternatives such as reusable packaging.

Impact: Resource conservation, reduced energy consumption, decreased landfill burden, and facilitates recycling efforts.

Smart demolition practices:

Objective: Minimise waste during demolition activities and maximise material recovery.

Action: Implement careful demolition practices to salvage and recover materials for reuse, carefully dismantle structures to preserve reusable components, and segregate demolition waste for recycling.

Impact: Minimises the amount of waste generated during demolition activities and maximises resource recovery.

Design for deconstruction:

Objective: Promote sustainability and resource efficiency.

Strategy: Design buildings and structures with the future in mind, allowing for easier disassembly and material recovery during demolition or renovation.

Impact: Facilitates the reuse and recycling of materials, reducing the overall volume of waste generated.

Energy efficient construction:

Objective: Reduce energy-related waste during construction activities.

Action: Optimise energy use on-site, choose energy-efficient construction methods, and explore renewable energy sources where feasible.

Impact: Reduced greenhouse gas emissions, climate change mitigation, optimised resource use, lower operating costs, improved indoor environmental quality.

Materials procurement planning:

Objective: Waste minimisation, sustainable material selection, procure materials with minimal environmental impact, and efficient use of resources.

Strategy: Plan and procure materials with precision to minimise overordering and excess inventory.

Impact: Reduces the amount of surplus materials that may become waste and lowers disposal costs.

Supplier collaboration for sustainability:

Objective: Encourage sustainable practices among suppliers to minimise environmental impact.

Action: Collaborate with suppliers to adopt environmentally friendly packaging, source materials responsibly, and adhere to sustainability standards.

Impact: Reduces unnecessary packaging waste and promotes sustainable supply chain practices.

Training and awareness:

Objective: Educate construction personnel on waste reduction practices and the importance of minimising waste.

Action: Conduct regular training sessions, provide informational materials, and foster a culture of waste reduction awareness among workers.

Impact: Raises awareness, promotes responsible behaviour, and fosters a culture of waste reduction on-site.

Waste audits and monitoring:

Objective: Continuously evaluate and improve waste minimisation practices throughout the construction project.

Action: Regularly review waste management procedures, conduct waste audits, and incorporate lessons learned to enhance waste reduction efforts.

Impact: Provides insights into areas for improvement and helps track progress toward waste reduction goals.