

Sustainable Demolition and Site Clearance for the Scottish Prison Service



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Scottish Prison Service Framework contract for estate redevelopment

- HMP Edinburgh
- HMYOI Polmont
- HMP Shotts
- HMP Low Moss



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Scottish Prison Service Briefing requirements for all projects

- Tender documents set the standard for sustainability
- SPS Sustainability Policy
- Breeam Assessment of all buildings
- Energy Performance Certificates
- Post Occupancy Review of completed projects

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Managing sustainability

- Sustainability Advisory Committee.
- Group Sustainability Committee.
- Sustainability Operations Group.
- Business Group sustainability professionals and champions.
- Sustainability Policy endorsed at the highest level.
- Project specific Sustainability Action Plan
- Actual progress measured and monitored monthly



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Demolition of HMP Low Moss, Glasgow

- At the outbreak of World War 2, the government constructed RAF Bishopbriggs as a barrage balloon facility
- After the war it was used as a civil defence base.
- In 1967 part of the complex was sold to the Scottish Prison Service and converted to a low security prison.



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Scope of the project

- The contract comprised a number of initial site surveys, followed by demolition of the former prison and site clearance.
- The project was in effect an enabling works contract for the development of the new HMP Low Moss on the same site
- Prior to the commencement of the demolition works certain planning conditions had to be discharged. Carillion were responsible for discharging of these planning conditions.
- One of these included how we would deal with waste management, sustainability and the environment.

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SPS brief set out in the Invitation to Tender

- “The Contractor undertaking a waste management audit prior to demolition commencing (at AG2 and AG4) to identify the potential for cost effective recovery of material from site demolition”
- “Addressing sustainability issues, including a site waste management plan and the waste management audit report on the opportunities to recycle materials to illustrate how waste is being diverted from landfill”.
- “Advising on potential environmental impact and sustainability issues in accordance with SPS Sustainability Policy and undertaking option appraisals where appropriate”.

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Sustainable partnership



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Project targets for demolition and site clearance

- Carillion's tender submission included detailed responses to all key issues raised in the ITT
- Carillion engaged with all key stakeholders to address planning conditions prior to submitting our tender
- One of the main focuses for the site team, was to implement a waste management programme to achieve an agreed target.
- The target was set at 98% of demolitions being recycled and re-used
- The target was to send 2% of the waste material to landfill sites



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Project targets for demolition and site clearance

- Existing steel frame buildings were dismantled and sold
- Existing timber buildings were processed on site for use in production of chipboard
- Remaining timber was refined as bio-fuel
- The demolition contractor stripped the metal roofing sheets for re-use



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Project targets for demolition and site clearance

- The concrete, brickwork and blockwork was crushed on site and approximately 35,000t of Class 6F2 material was produced for re-use
- Internal fittings were salvaged: radiators, toilets, sinks, light fittings, metal sockets and switches and over 200 fire extinguishers for re-supply to the market.



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Sustainable site offices

- To reduce our carbon footprint Carillion used porta-cabin offices that were earmarked for demolition for our site establishment.
- All of the furniture/white goods were also salvaged from the former Low Moss Prison.



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The Carillion site team also worked to promote sustainability and the environment.

We salvaged furniture, fixtures and fittings from the vacant prison buildings

- office equipment
- white boards / pin boards / notice boards
- sanitary fittings
- 4000 bobbins of yarn



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These salvaged goods were advertised on www.freecycle.org through the assistance of the East Dunbartonshire Council Sustainable Development Officer.

The responses to the adverts were reviewed and various local charities and residents benefited including:

- Campsie View School
- The Glasgow Humane Society
- Duke of Edinburgh Award Scheme
- The Prince's Trust

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Local community benefits

A local charity: "BUGS" – Balornock Urban Gardens Scheme removed materials; timber, double glazed windows & security screens, paving slabs and gravel, which they have utilised in primary school allotments they have developed.



The Prince's Trust removed timbers from buildings and have used them in the manufacture of new huts at an outward bound centre, in The Trossachs, for disadvantaged children.

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Local environmental benefits

To compensate for the loss of habitat, bird boxes were procured from the Scottish Prison Service. They were erected by East Dunbartonshire Council Greenspace Officers. The boxes were for Barn Owls, Kestrels and Sparrows.



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View of the former HMP Low Moss after demolition.

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Proposed/Actual Targets

Description	Proposed Tonnage	Proposed Percentage	Actual Tonnes Achieved	Actual Percentages Achieved
Reused steelwork from building frames	80	0.15	80	0.15
Inert clean crushed debris (6F2)	48,000	87.4	35,000	66.42
Unsuitable crushed debris	0	0	13,000	24.67
Tarmacadam	2,500	4.55	2,500	4.74
Steel and metalwork	500	0.90	606	1.16
Clean timber	600	1.10	707	1.34
Services installations	150	0.25	*	
Residual mixed debris for separating	2000	3.65	560	1.06
Total	53,800	98.00	52,453	99.55
Asbestos containing materials to landfill	300		176	
Residual debris to landfill	800		60	
Total	1,100	2.00	236	0.45
Gross Total	54,390	100.00	52,689	100.00

* Included in steel and metalwork

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Signing of Sustainability Charter

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Questions

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