

Ice Arena Wales Enabling Zero Waste



Introduction



Derwyn Pugh
Senior Project Manager



John Parry
Project Manager



Katie Henton
Trainee Manager


Site Overview

- International Sports Village
 - Cardiff International Pool
 - Cardiff International White Water
- 

Site Overview



Project Overview

- 
- £16.8m, 8500m²
 - JCT, Design & Build 2011
 - 71 week programme

Project Overview



Closer to your project

Project Overview



Closer to your project

Project Overview



The Story Starts Here

Project Overview



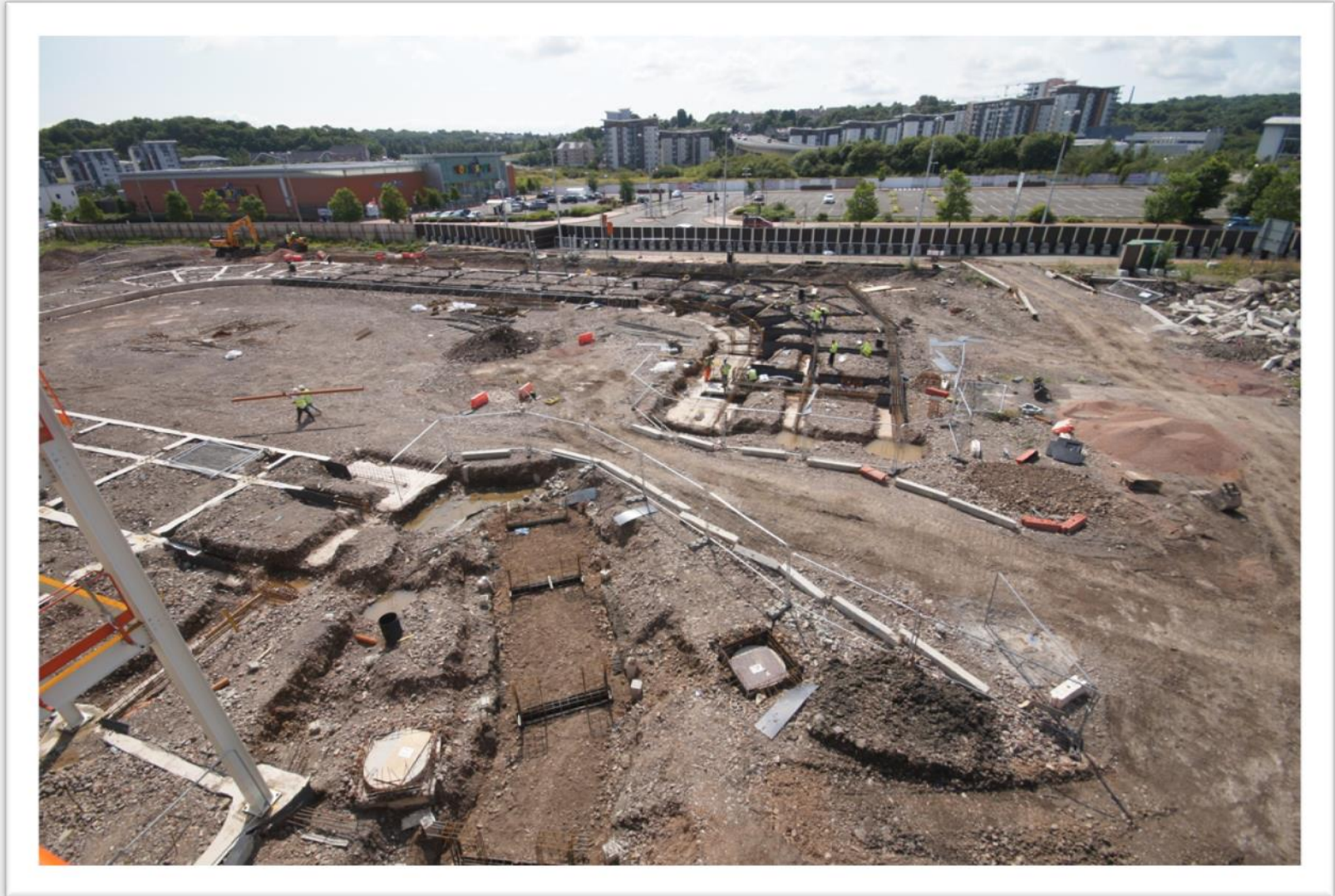
Project Overview



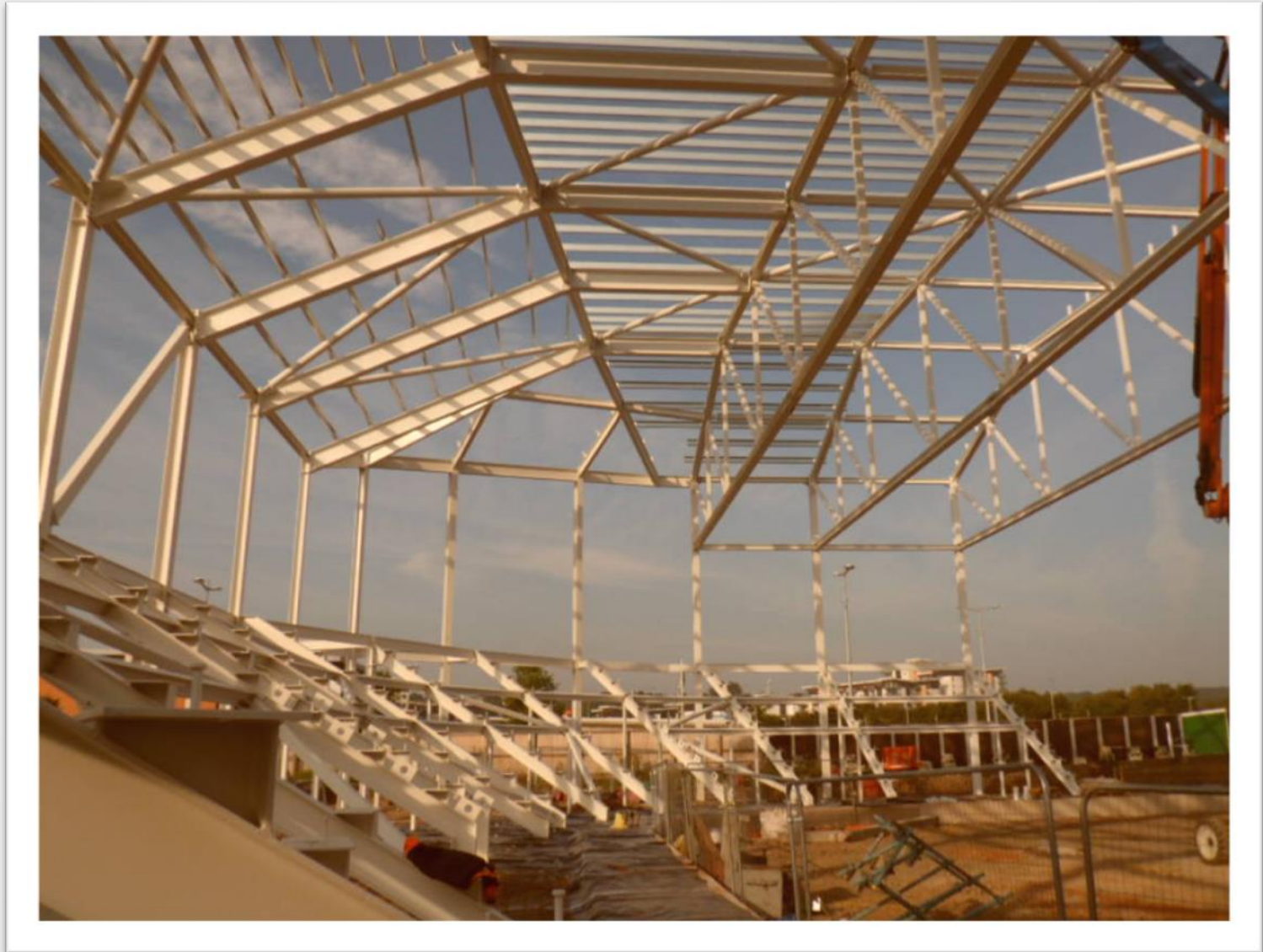
Project Overview



Project Overview



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Project Overview



Onsite Logistics

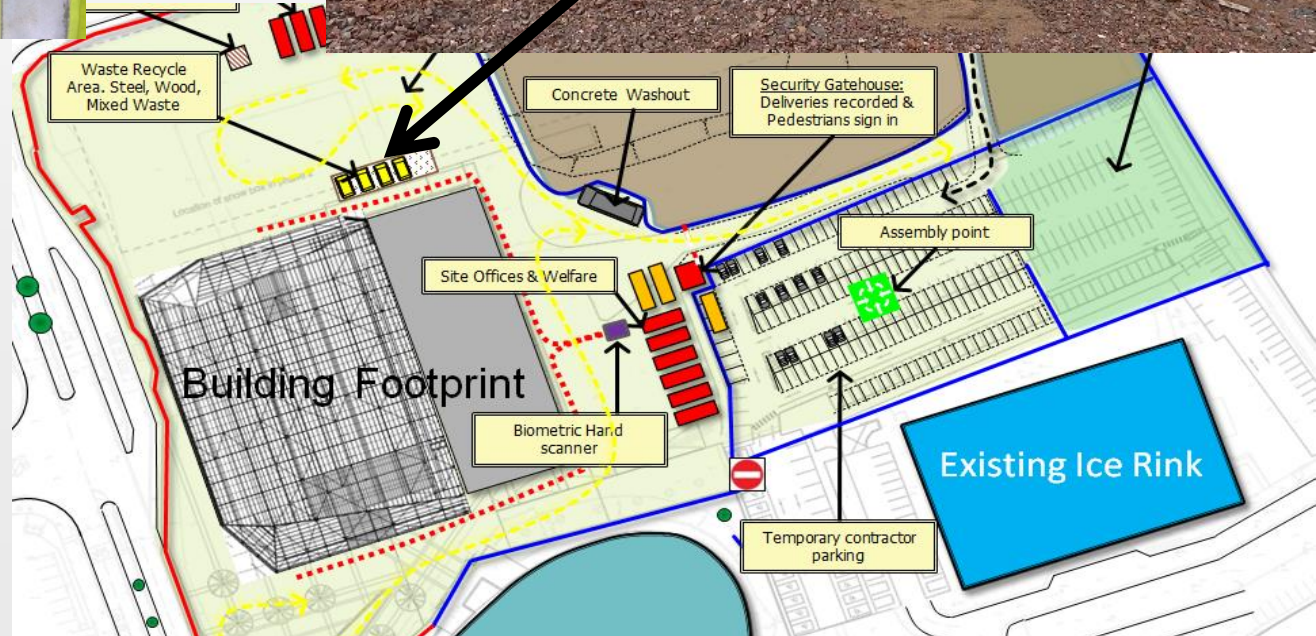


- ✓ Learning lessons
- ✓ Moving Skip Area
- ✓ Better Segregation

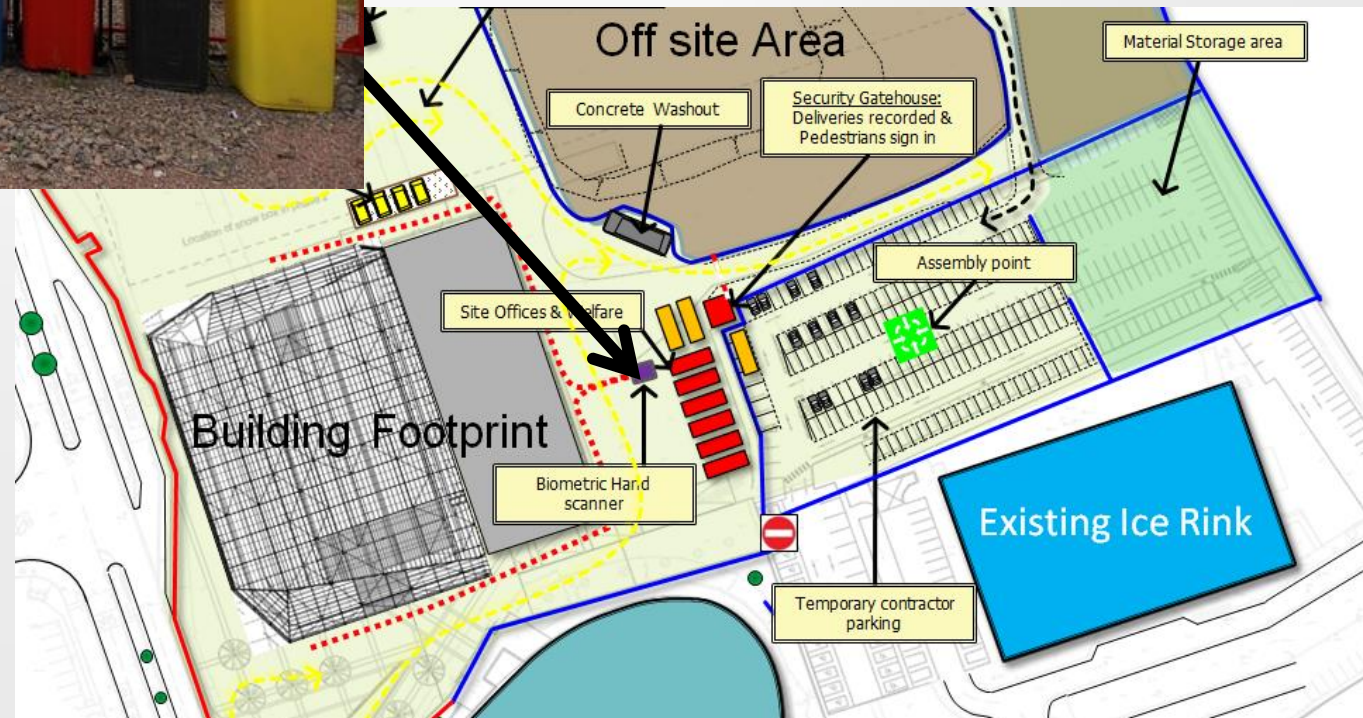
Onsite Logistics



**Gareth Stone
Waste Champion**



Onsite Logistics



Onsite Training



W2

Toolbox talks: waste

Segregation of waste

H

What?

- segregating wastes into hazardous, non-hazardous and inert for disposal can help minimise costs and maximise the opportunities for recovery and recycling of wastes
- check waste containers for standard signs (see figure), which are being introduced across the UK to encourage and improve the segregation of waste.

Why?

- **avoid environmental harm:** incorrectly disposing of hazardous waste could cause water pollution and damage habitats. Landfills and waste treatment centres are specially designed to be able to handle specific wastes without causing environmental harm
- **avoid prosecution:** it is illegal to mix hazardous waste with other waste types that are to be sent directly to landfill. A fine of up to £20 000 and imprisonment for up to five years could be incurred
- **reduce costs:** segregating wastes can maximise recycling and can also allow certain types of waste to be recycled and reused on site.

Questions

- 1 Why segregate waste?
- 2 Where on this site is the waste storage area?
- 3 What type of storage containers for waste should be used?



Do

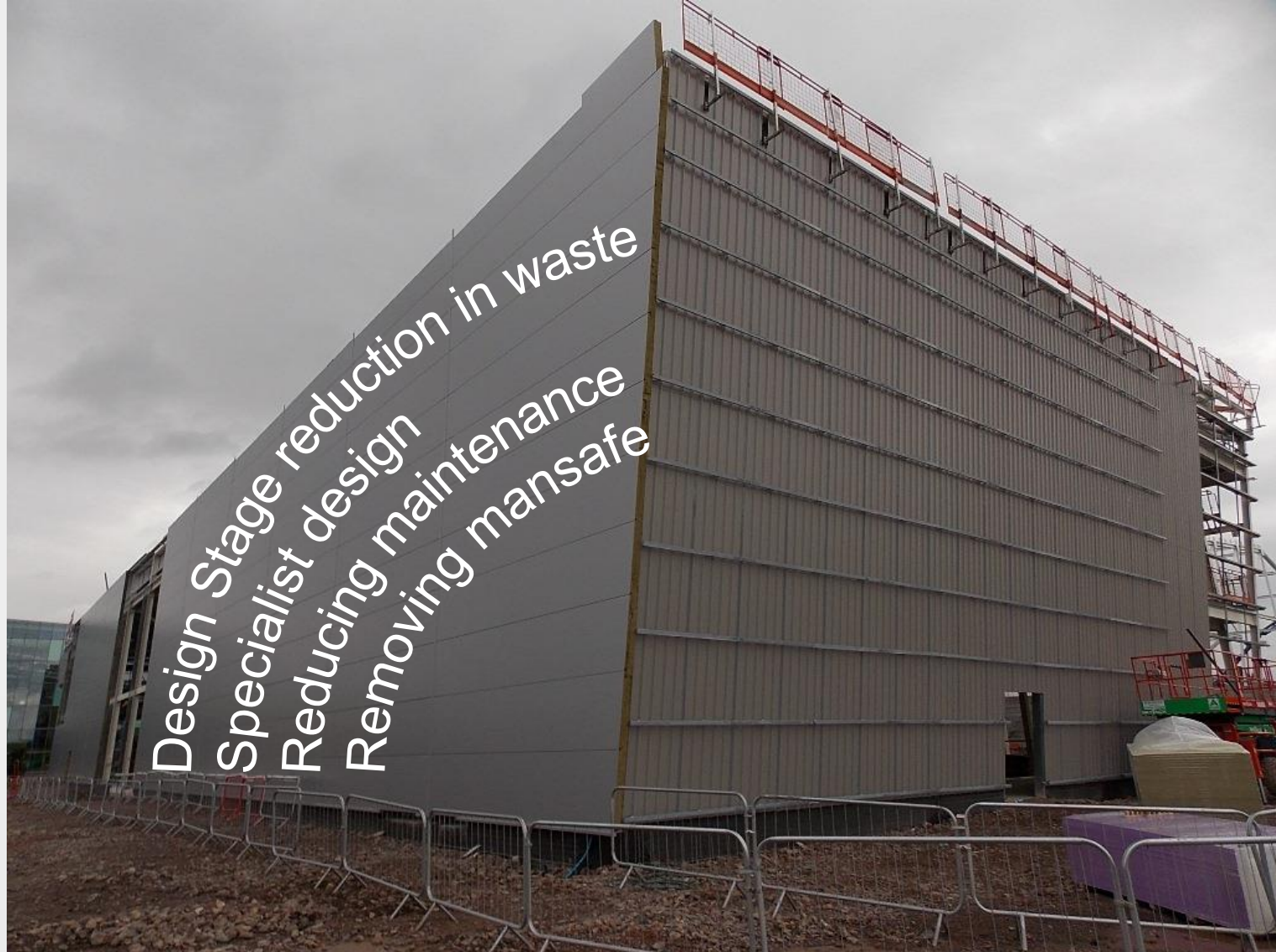
- ✓ look out for the standard signs shown in the figure. Where possible segregate wastes into the different types
- ✓ check what skips there are on site and ensure the correct wastes are placed in the correct skips
- ✓ close lids or doors on skips to prevent waste getting wet or escaping
- ✓ ask a line manager for advice if unsure about correct waste segregation on site.

Don't

- ✗ overfill skips
- ✗ put liquids and flammable liquid wastes into skips
- ✗ mix non-hazardous and hazardous waste.

K

Pre Construction



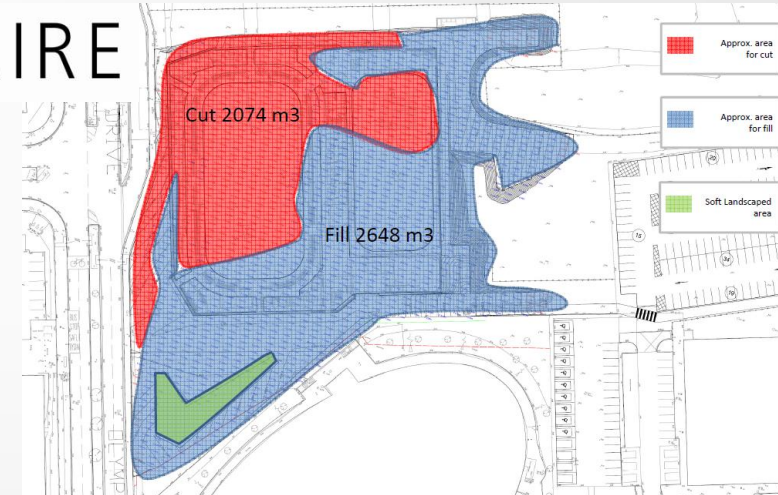
Materials Management Plan (MMP)

Greenbank Partnerships
ISV Waterfront Site
Geo-Environmental Interpretative
Report

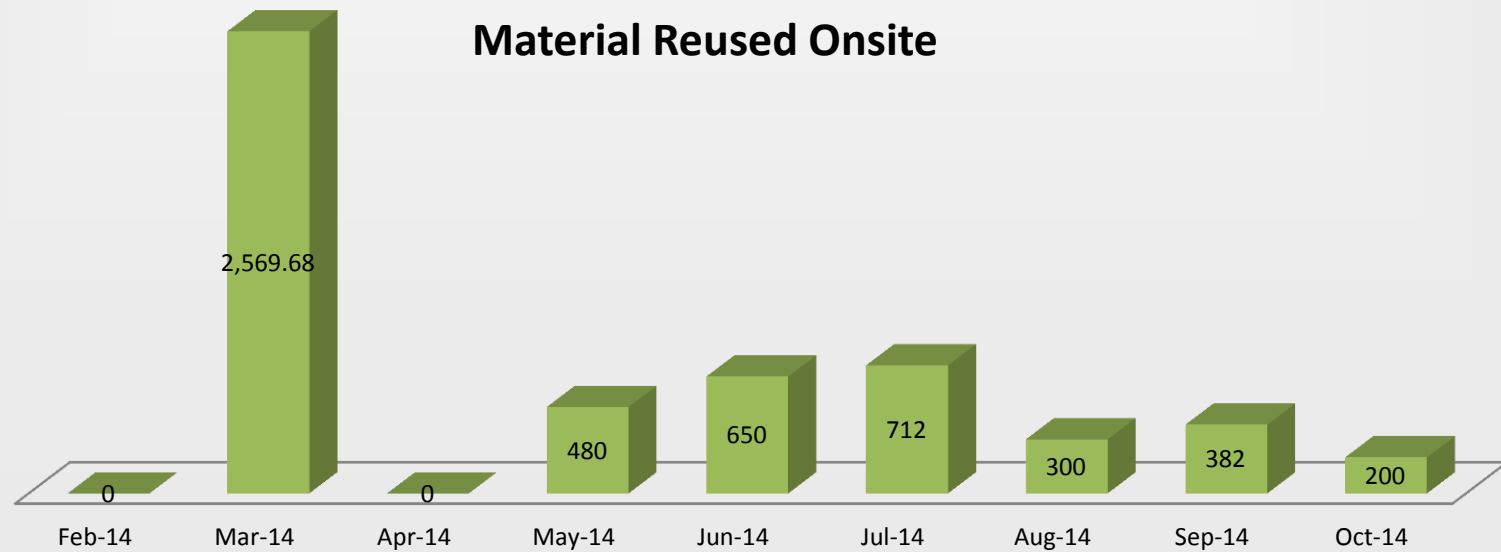
Issue | 21 October 2013

ARUP

CL:AIRE




Materials Management Plan (MMP)



CEW Site Visit's



Site Visit

Site Name	Ice Arena Wales
Date	23 rd October 2014
Project Stage	Steel installation and roofing over smaller steel structure. Groundworks, steel frame almost complete, roofing of smaller rink almost complete as well as building envelope started. Concrete steps and seating areas installed
	
Previous stages and actions to collate information of:	Euroclad and Eurobond materials on site as well as fatra materials delivered to Massey Cladders. Massey cladders organised their own recycling collection rather than the take up scheme from the Euroclad and Eurobond as they found a cheaper option through BIFFA. Waiting to collate recycling figures from BIFFA.
Site contact details:	Derwyn Pugh
Site waste controller details:	As above
Photographs:	Photographs within report

RECOMMENDATIONS TO MINIMISE WASTE TO LANDFILL

Action Required	By whom
Raise waste Awareness on site <ul style="list-style-type: none"> All contractors on site to be issued with toolbox talks on housekeeping and waste segregation system that is in place on site. Pre-let meetings to inform contractor of Enabling Zero Waste project or Iona to be involved with the Pre-let 	Derwyn/Katie Derwyn
Reduce number of general mixed skips leaving site <ul style="list-style-type: none"> Review how successful the new compound area is by checking if segregation is happening Any issues with contractors not segregation a tool box talk can be carried out by Iona Ask Eurobond regarding the recyclability of the panel wastes and if they will pick up. Ask Fatra UK if they will confirm removal of membrane waste as originally discussed To get BIFFA recycling rates for recyclables – Kevin to e-mail contact details 	Derwyn Derwyn/Katie Iona/Kevin Iona Kevin/Iona
Improve waste segregation <ul style="list-style-type: none"> Tool box talks to all on site of the waste storage area and the segregation on site. To e-mail waste tool box talks to Kevin at Massey Cladders Have a set area for wood pallets as these may fill your wood skips with fresh air and will also make it easier for collection by wood recyclers or pallet collector 	Derwyn/Katie Iona Hughes Derwyn/Katie
Improve Material Storage <ul style="list-style-type: none"> 	
Minimise packaging waste <ul style="list-style-type: none"> Meeting with Fatra UK regarding arrangements to remove their packaging waste and materials produced by Massey Cladders Calculate the estimated quantities of packaging waste from Euroclad. (Gethin Williams to provide this information once a confirmed order has been sent 	Iona Hughes Iona Hughes

Supply Chain



Supply Chain



39-42 East Street, Brighton, BN1 1HL. Tel: 01273 203040.
Email: info@communitywoodrecycling.org.uk

Month: June 2014

WOOD REUSE AND RECYCLING - SINGLE SITE SUMMARY

Kier Construction - Western & Wales - Ice Arena Wales, CF11 OSP - Kier Construction Site Offices

Proportion of waste timber reused and recycled by tonnes

High Grade Reuse (13%) Low Grade Reuse (20%) Recycling (67%)



National average recycling rate for waste timber <= 50%¹
Your site average = 100%

COLLECTED BY	COLLECTION DATE	WTN	WOOD COLLECTED (cubic yards)	WOOD COLLECTED (tonnes ₂)	COST £	SAVING, £	RECYCLING SUMMARY					
							HIGH GRADE REUSE		LOW GRADE REUSE		RECYCLING	
							(DIY, wood products, pallets)		(firewood, kindling, allotments)		(chipped for fuel, chipboard)	
							tonnes	%	tonnes	%	tonnes	%
Reseico	24/06/2014	TNI061455	15.0	1.50	£240.00	£51.60	0.20	13.33	0.30	20.00	1.00	66.67
Totals:			15.0	1.50	£240.00	£51.60	0.20	13.33	0.30	20.00	1.00	66.67



Supply Chain

MASSEY
CLADDING
SOLUTIONS LTD.

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Almondsbury Business Park
Woodlands
Bristol BS32 4NQ

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www.masseycladdingsolutions.com

TOTAL ROOF
& WALL
CLADDING
SOLUTIONS



Quality / Waste & Recycling
Loose items, Removal / Recycling / Skipping of Debris / Waste and Material Storage

- In accordance to the Kier Specific Requirements for 0% Waste MCS will work with / organise its Material Suppliers to return to site and collect Palletised Packaging & Off Cut Materials for re-use within the their Manufacturing Process with Return Notes as evidence of Transfer
** Details can be found in the MCS Waste Transfer Details Sheet



Supply Chain Opinion



CEW EZW MCS 10-11-14.mp4



Kevin Spear- Massey Cladding Solutions

SWMP

SMARTWASTE

The waste reporting tool from BRE

Company menu
Logout

Project menu
Help



Project: IAW Cardiff Bay

Summary information

SWMP

Summary charts

Detailed information

smartER

Reports

Project Details

Project reference	N7157	Project use class	Other (Leisure)
Project name	IAW Cardiff Bay	Project type	New build
Actual start date	20/1/2014	Project value	£ 598,578.00
End date	17/7/2015	Gross internal floor area	8500.0 m ²

Actual waste sent offsite

	Total (m ³)	m ³ /£100k	m ³ /100m ²	Diverted from landfill (m ³)	Diverted from landfill (%)
Construction	40.8	6.8	0.48	38.0	93.1
Demolition	4.1	0.7	0.05	0.6	14.0
Excavation	47.7	8.0	0.56	42.5	89.0
Total (offsite):	92.7	15.5	1.1	81.1	87
Total (offsite & onsite):	2,662.4	444.8	31.3	2,650.7	100

Add

Waste management routes (for actual waste)

	Reused (%)	Recycled (m ³)	Recovery (%)	Disposal (m ³)	Energy Recovery (%)
Onsite	96.5	2,569.7	0.0	0.0	0.0
Offsite	0.5	13.7	0.0	0.0	2.5

Actual waste (onsite)

	Total (m ³)	%
Construction	0.0	0.0
Demolition	0.0	0.0
Excavation	2,569.7	100.0

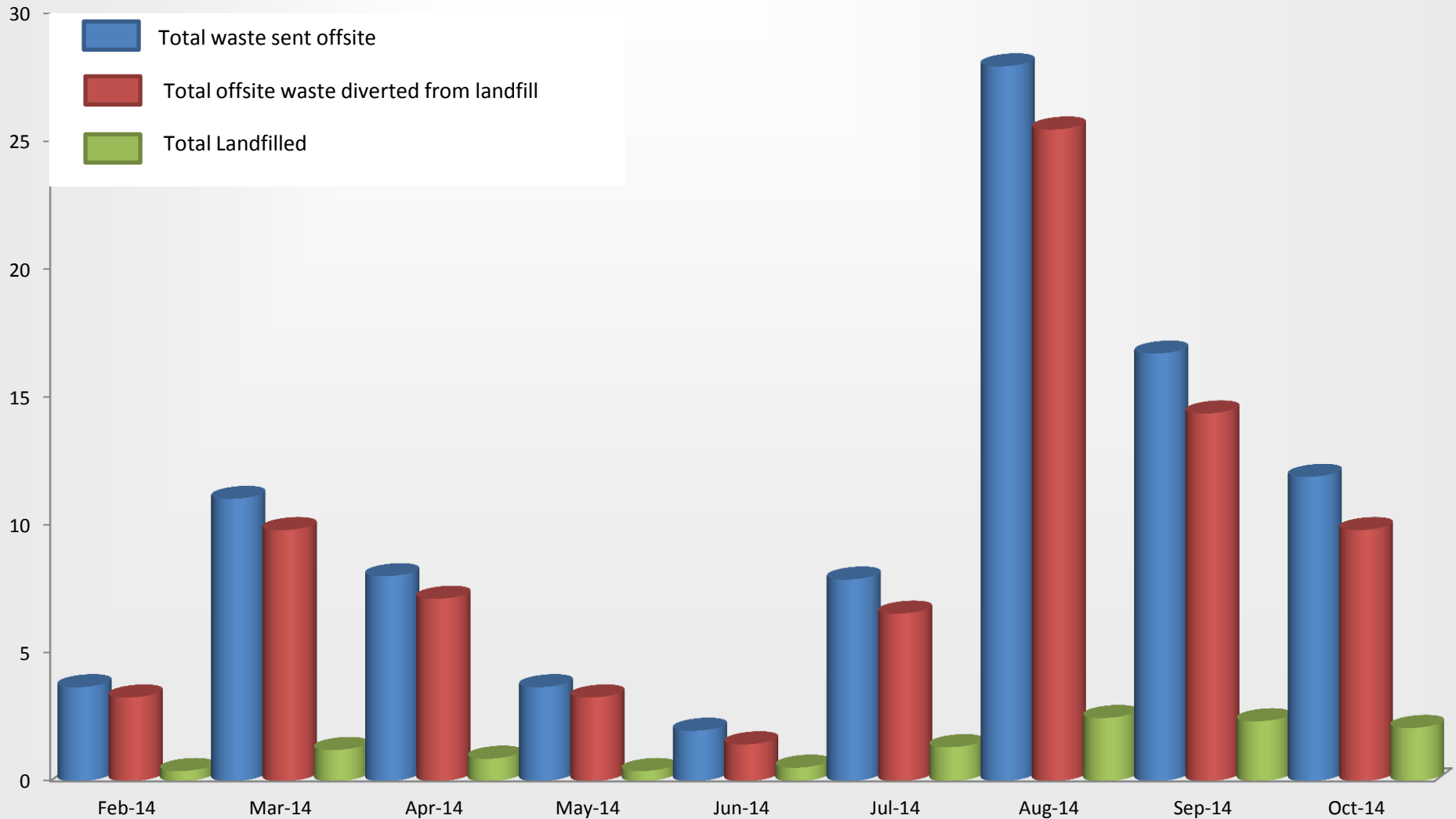
Total bulk waste (m³)

Total	3,590.4 m ³
/£100k	599.8
/100m ²	42.2
Number of waste containers to date	575
Tonnage of actual waste as entered	0.6

Site Waste Management Plan

SWMP

Waste removed from site



What Next?



