

Dig It: Reusing Contaminated Soils in the UK and US

February 7th, 2018



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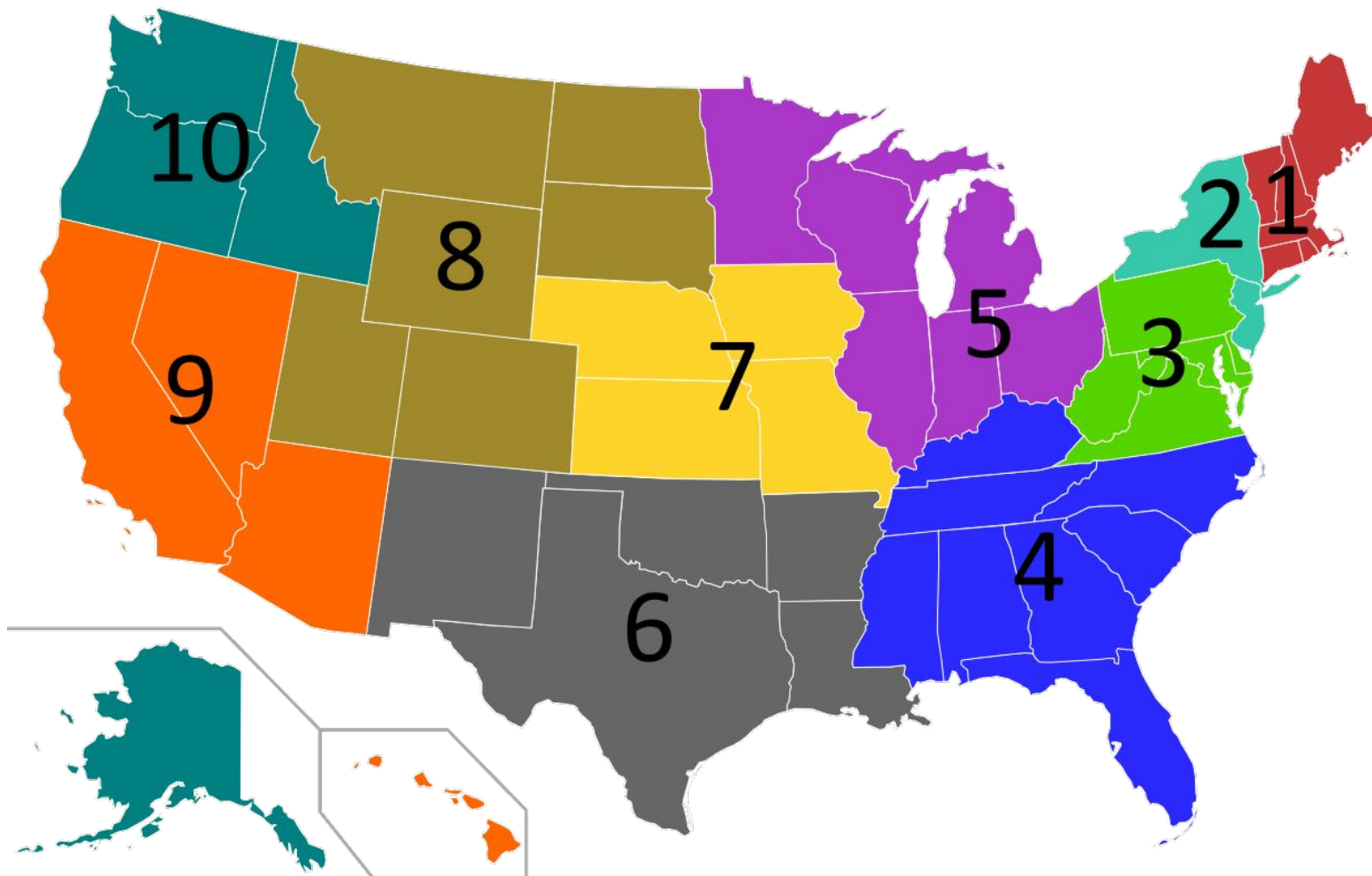


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TAB Locations



Today's Presenters



Martha Faust is the Executive Director of Minnesota Brownfields and has been with the organization since 2008. She directs the organization's overall strategy, programming, partnership initiatives as well as providing support to the Board of Directors, Advisory and other committees. Recent work includes publication of a report quantifying the economic, environmental, and social benefits of brownfield cleanup and reuse. Martha previously worked as a Planner for the City of St. Paul Department of Planning & Economic Development. Martha holds a Master's degree in Urban and Regional Planning from the University of Minnesota's Humphrey School of Public Affairs, and a Bachelors of Arts in Economics and French from the University of St. Thomas in St. Paul, Minnesota.



Nick Willenbrock has professional experience in both contaminated land consultancy and remediation contracting. He is the joint manager of CL:AIRE an NGO which support the sustainable reuse of land and is the national lead manager of The Definition of Waste: Development Industry Code of Practice (DoW CoP). The DoW CoP provides a clear, consistent and efficient process which enables the reuse of excavated materials on-site or their movement between sites. Use of the DoW CoP supports the sustainable and cost-effective management development of land, especially brownfields in England & Wales. It provides an alternative to Environmental Permits or Waste Exemptions. He is an active member of the Geological Society of London, and has further interests and experience in sustainability assessments and the development of standards and training for the land management sector.

U.S. Fill Efforts Today

Policy & Research:

ASTSWMO Focus Group
Report

Soils Reuse Workgroup
(NEWMOA)

MNB Soil Reuse
Study

Logistics:

Fill Exchange/Transfer

NYC Clean Soil Bank

Dredge Programs

State Efforts & Programs:

Ohio

Massachusetts

Minnesota

New York

Pennsylvania

Economic & Environmental Drivers

DIG AND DUMP



Current barriers to urban fill reuse encourage developers to "dig and dump," hauling excess soil to a landfill and paying to bring clean fill to the site.

HIDDEN COSTS OF DIG AND DUMP



- Transportation and fuel costs
- Wear and tear on roads
- Cost to import clean fill
- Public grant money often spent primarily on dig and dump
- Excess soil takes up landfill space

SAVINGS FROM RECYCLING FILL



Off-site reuse can result in savings compared to the cost of landfill disposal. With these savings, public grant funds go further, promoting further redevelopment.

Challenges



Standards Development

Must ensure fill re-use is safe, does not negatively impact disadvantaged communities, is not misused.

Liability Relief

Provide soil importers/exporters with liability assurance for proper fill re-use

Facilitating Exchange

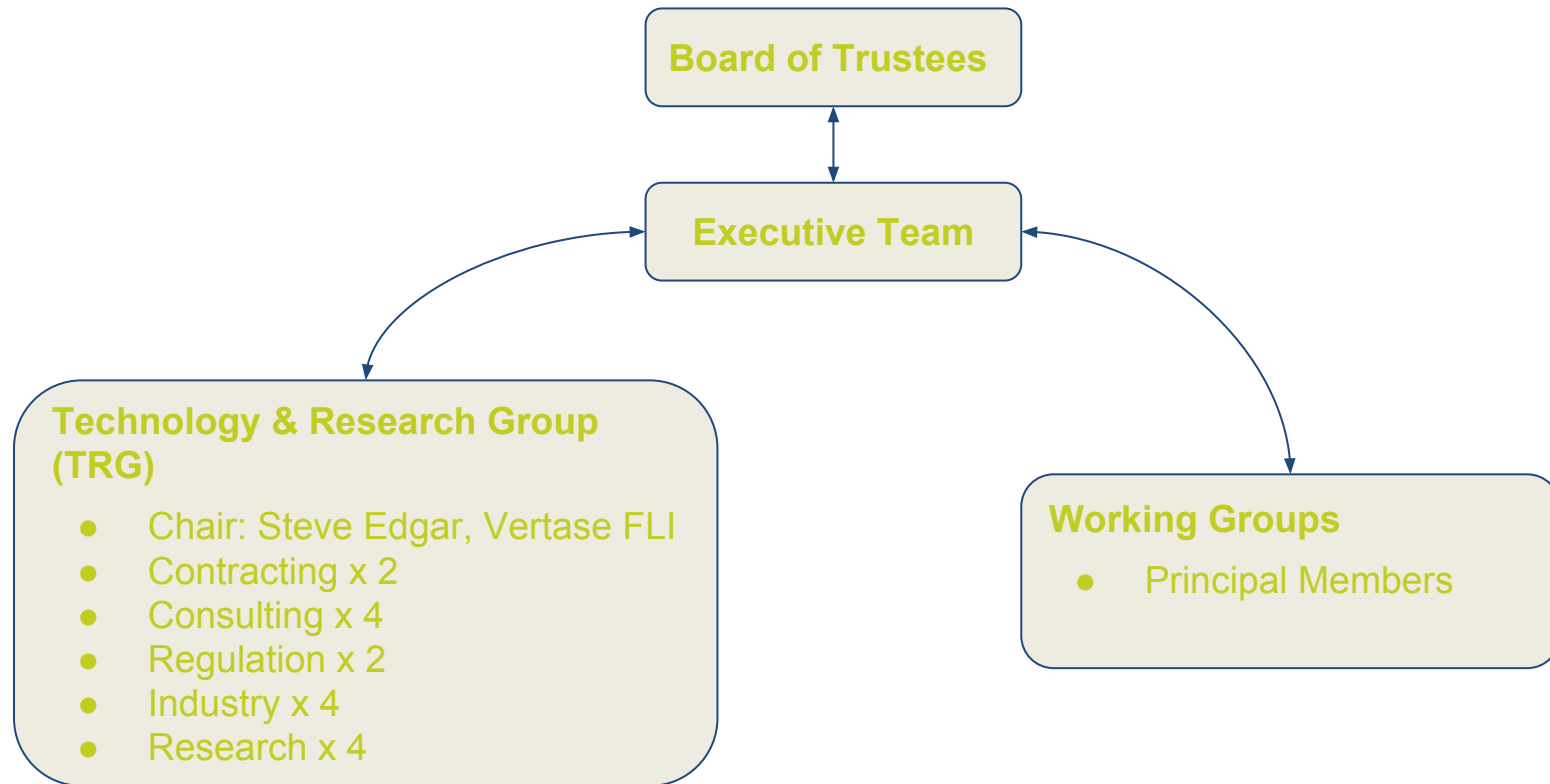
Need mechanism to exchange (and store?) fill soils between redevelopment projects.

CL:AIRE

LEADING SUSTAINABLE LAND REUSE



Structure of CL:AIRE



PRINCIPAL MEMBERS

CL: AIRE
LEADING SUSTAINABLE LAND REUSE

ARCADIS
Design & Construction
for water and
wastewater

B&A GROUP
RESPONSIBLE. RELIABLE. READY.

Celtic
a subsidiary of Grubbe Doris

DEC
Environmental Contractor

Environment Agency

ERM

HORIZON
NUCLEAR POWER

hs2

John F Hunt Remediation Ltd

KIER

MICK GEORGE

nationalgrid

**Cyfoeth Naturiol Cymru
Natural Resources Wales**

NDA
Nuclear
Decommissioning
Authority

RSK

RURAL ARISINGS

Shell Global Solutions (UK) Ltd

The Lyndon Pallett Group

**Vertase
FLI**

WILLMOTT DIXON

Arcadis
Bristol & Avon Transport &
Recycling Ltd
Capenhurst Nuclear Services
(CNS) Ltd
Celtic enGlobe
DEC UK
Defra
DSRL
Environment Agency
ERM

Homes and Communities Agency
Horizon Nuclear Power
HS2 Ltd
John F Hunt Remediation Ltd
Kier
LLWR Ltd
Magnarox Ltd
Mick George
National Grid Property Ltd
Natural Resources Wales
Nuclear Decommissioning
Authority

RSK Group PLC
Rural Arisings
RWM
Sellafield Ltd
Shell Global Solutions (UK)
SPASF Priroda
Springfield Fuels Ltd
The Lyndon Pallett Group
Vertase FLI Ltd
Willmott Dixon Group
WSP

Supporter Members

ABO Group
Advisian (WorleyParsons Group)
AECOM
Airborne Environmental
Consultants Ltd
Alun Griffiths (Contractors) Ltd
Alzure
ARUP
Atkins Ltd
BAE Systems Environmental
BAM Nuttall
Beech Group
BIOGENIE
Bone Environmental Consultant
Brian Scott Consultants Ltd
British Geological Survey
BT O'Sullivan Construction
Solutions Ltd
Campbell Reith Hill LLP
Cardiff University
Cavendish Nuclear
CH2M
Coal Authority
Coleman Remediation
Services Ltd
Constructing Excellence
Coopers
Cornelsen Ltd
Deep Soil Mixing Ltd
DWL Environmental Ltd
DynaSafe BACTEC Limited

Ecologia
Environmental Scientifics
Group Ltd
Envirosurveying Ltd
Firth Consultants Ltd
Geo-Environmental Matters Ltd
Geo-Environmental Services Ltd
Geosyntec
H Fraser Consulting Ltd
HBR Limited
Hydrock
Imperial College London
Jacobs
Kalex Limited
Keltbray Ltd
Laci Land Restoration
LBH Wembley Engineering
Listers Geotechnical Consultants
Lithos Consulting
M A Smith Environmental
Consultancy
McAuliffe Civil Engineering
MLM Group
Mott MacDonald
NHBC
Northern Ireland Environment
Agency
Opus International Consultants
(UK) Ltd
Oracle Environmental Experts Ltd
PeroxyChem

Peter Brett Associates LLP
r3 Environmental Technology Ltd
Rabbit Waste Management Ltd
REGENESIS Remediation
Solutions
Remedia Group
Residential & Civil Construction
Alliance of Ontario (RCCAO)
Rolton Group
Roundhay Environmental
Consulting Ltd
RPS Group Plc
SLR Consulting Ltd
Smiths (Gloucester) Ltd
Soilfix Ltd
Southern Testing
Sweco UK
Swindon Asbestos Surveying Ltd
TerraConsult Ltd
The Environmental Protection
Group Ltd (EPG)
The Sirius Group
Universite de Liege
University of Plymouth
University of Portsmouth
University of Sheffield
University of York
VHE Construction Plc
Ward Recycling
Waterman Group
Westridge Construction Ltd

**Minnesota
Brownfields**



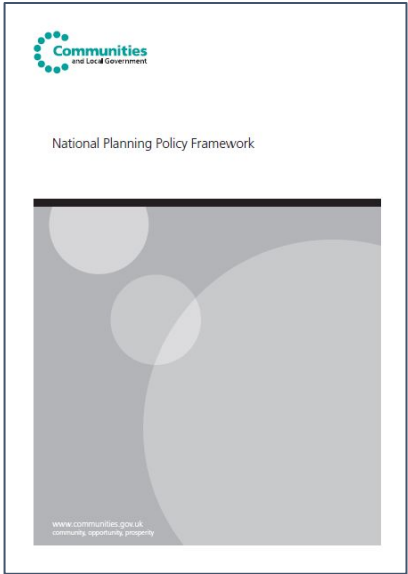
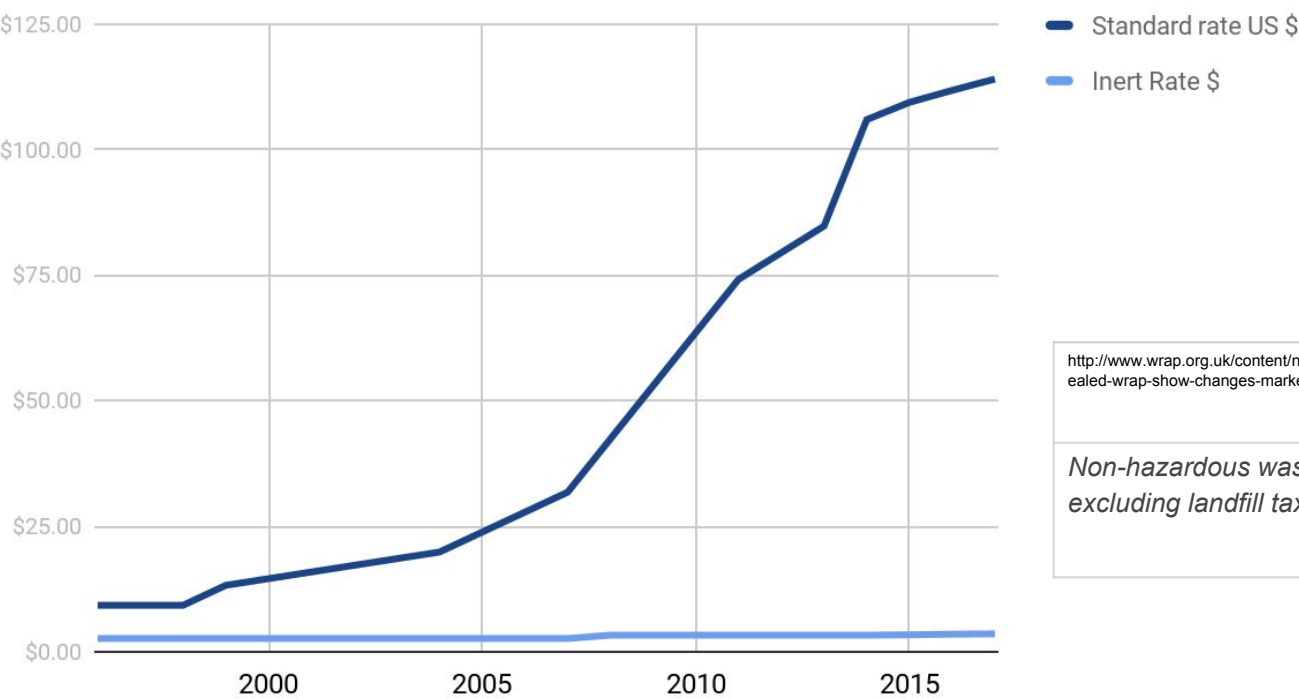
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Incentives

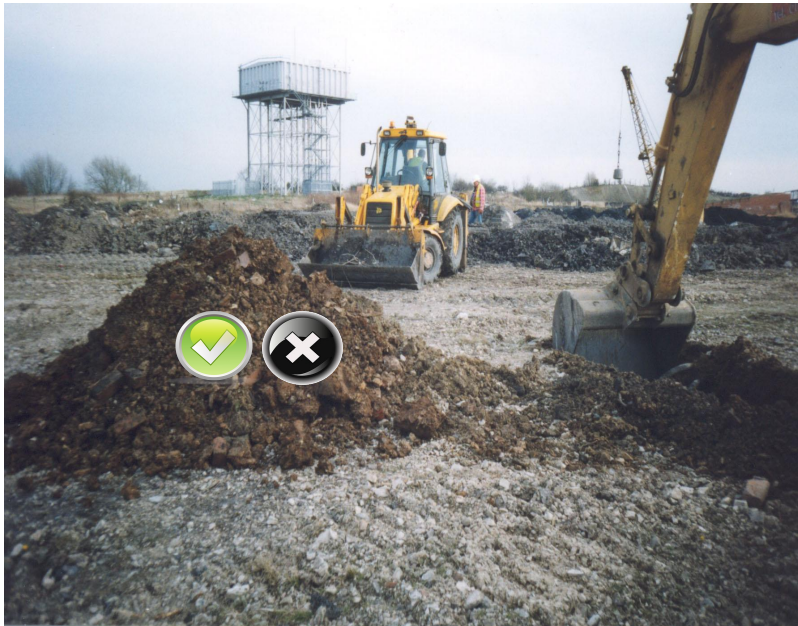
UK Landfill Tax Rates



http://www.wrap.org.uk/content/new-gate-fees-revealed-wrap-show-changes-market	Median	Range
Non-hazardous waste excluding landfill tax	£19	£8 to £62
	\$25	\$11 to \$82

Purpose of the DoW CoP

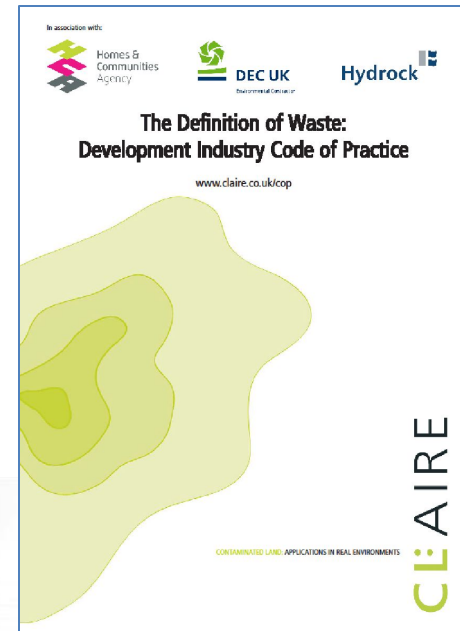
- Good practice – waste?

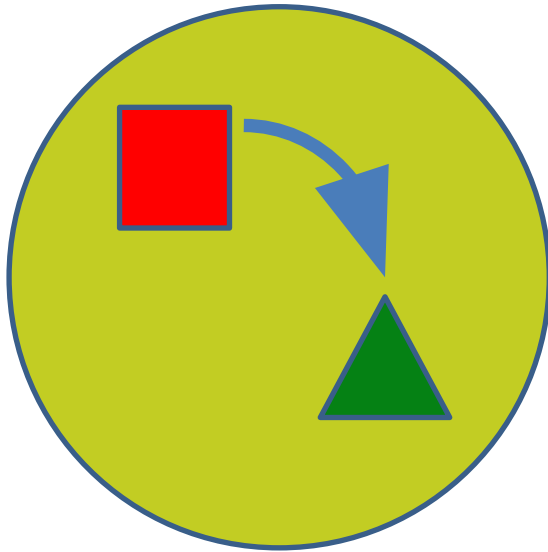


Site Specific

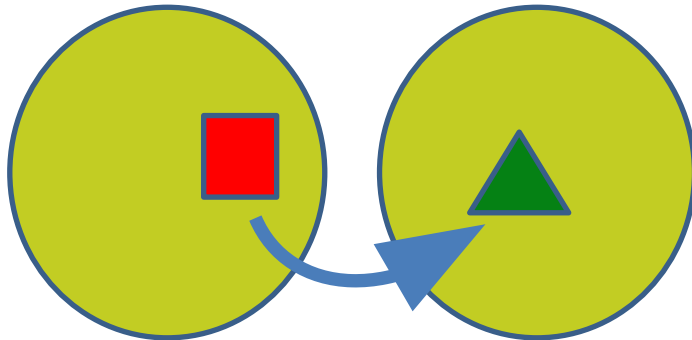


Following Treatment

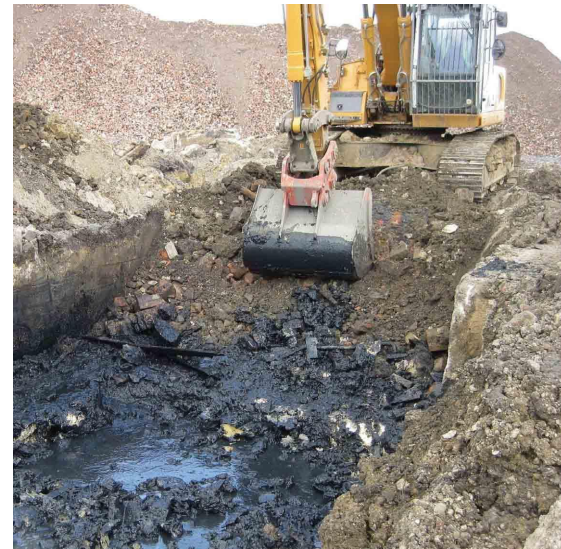


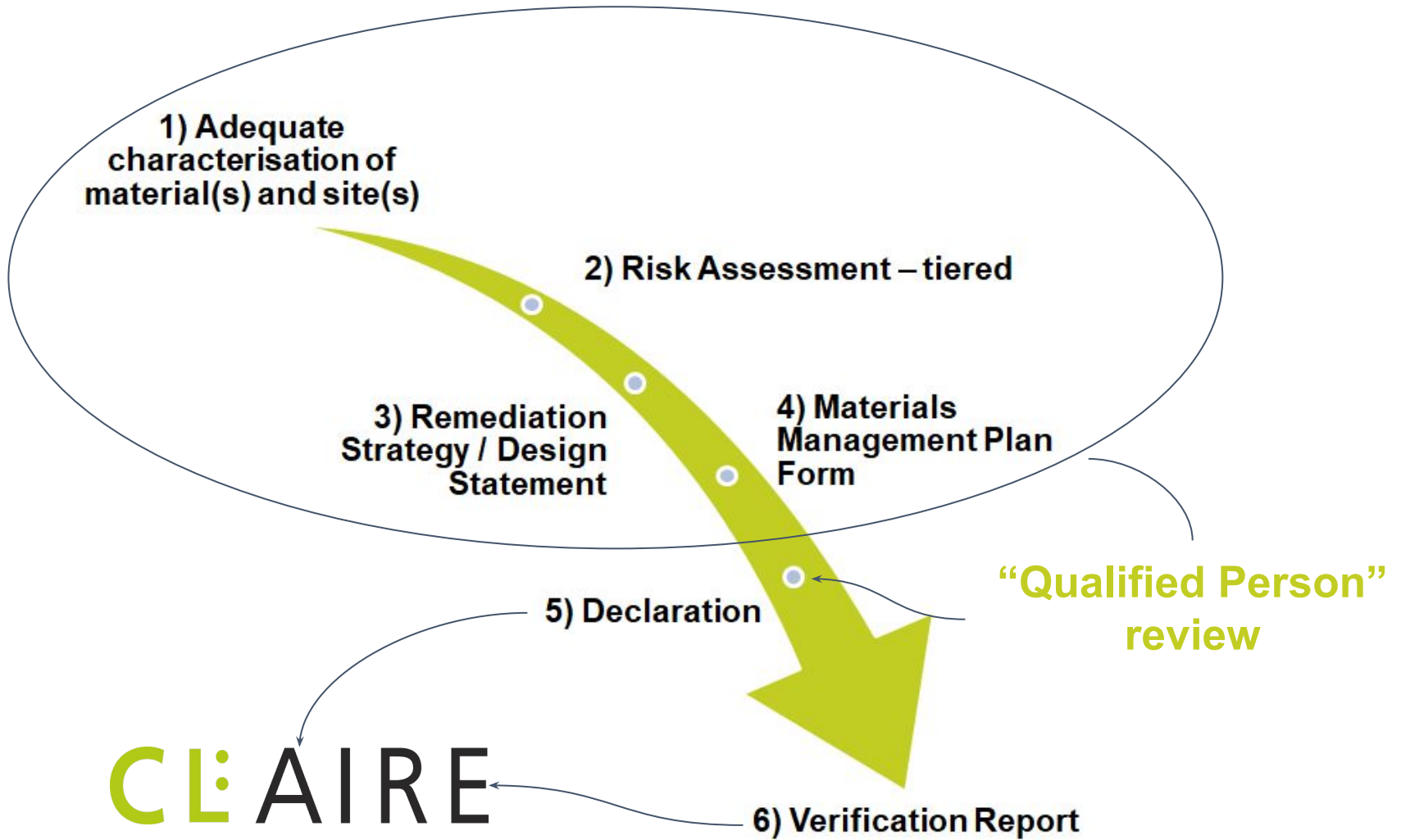


Excavation & reuse of material – on site or on another site



Brownfield & greenfield sites - contaminated or clean





CL:AIRE Register of Materials

Register of Materials: Receiver Sites

Click on any column heading to sort the list.

SUBMIT A RECEIVER SITE

#Ref	Submitted date	Location	Quantity needed	Required from	Required until	Material Type	Specified End Use
D056	21/09/2017	Perry Barr Birmingham	145,000	01/07/2018	01/11/2019	clay	Available on request
R055	20/07/2017	Coventry, West Midlands	20,000	20/07/2017	20/07/2020	Inert / Non Hazardous Soil	Acoustic Bund and Land Raise
R053	02/05/2017	Essex CM22 (Kalex project ref egl2017)	58000	01/09/2017	31/05/2018	Inert natural soils (excluding top-soil)	Landscape engineering
R052	10/04/2017	Beech Hill Farm, Westerleigh Road, Westerleigh, Bristol	45000.00	10/04/2017	31/12/2017	Inert granular or cohesive materials	Engineered Landfill Cap
R007	15/03/2012	Dartford, Kent	2,995,500 m3	01/04/2012	31/05/2022	Inert fill/sub-soils/hard-core	Creating an engineered platform for the development of 1200 houses
			400,000 t	31/03/2014	31/03/2018	Soils	Soils for landfill

Home Profile Connections Jobs Interests

Clay & Stiff Clay (greenfield virgin site) & 4 New Soil ... more

CL:AIRE Register of Materials
Inkd.in · CL:AIRE keeps a Register of Materials and services which might fall within the DoWCoP. To view the Register of Materials click on the links in the article index box. It helps to link material holders with projects requiring materials....

Organic
Targeted to: All Followers

999 impressions 4 clicks 5 interactions 0.90% engagement

Sponsor update

Like (4) · Comment · Pin to top · 6 days ago

Melissa Morales, Tim Cawood +2

Add a comment...

CL:AIRE New Soil Treatment Facility to our Register of Materials - F009 - Wolverhampton - 200,000t - Immediate Hazardous and contaminated non-hazardous soils and other waste materials. - Treatment of a broad range of contaminants including hydrocarbons, ... more

Organic
Targeted to: All Followers

2,206 impressions 26 clicks 20 interactions 2.09% engagement

Sponsor update

Like (17) · Comment · Pin to top · 14 days ago

Mark Johnson, Claire B AIEMA +15

<https://goo.gl/RMjkaz>

DoW CoP Adoption

Declarations =
3,293



QPs = 266

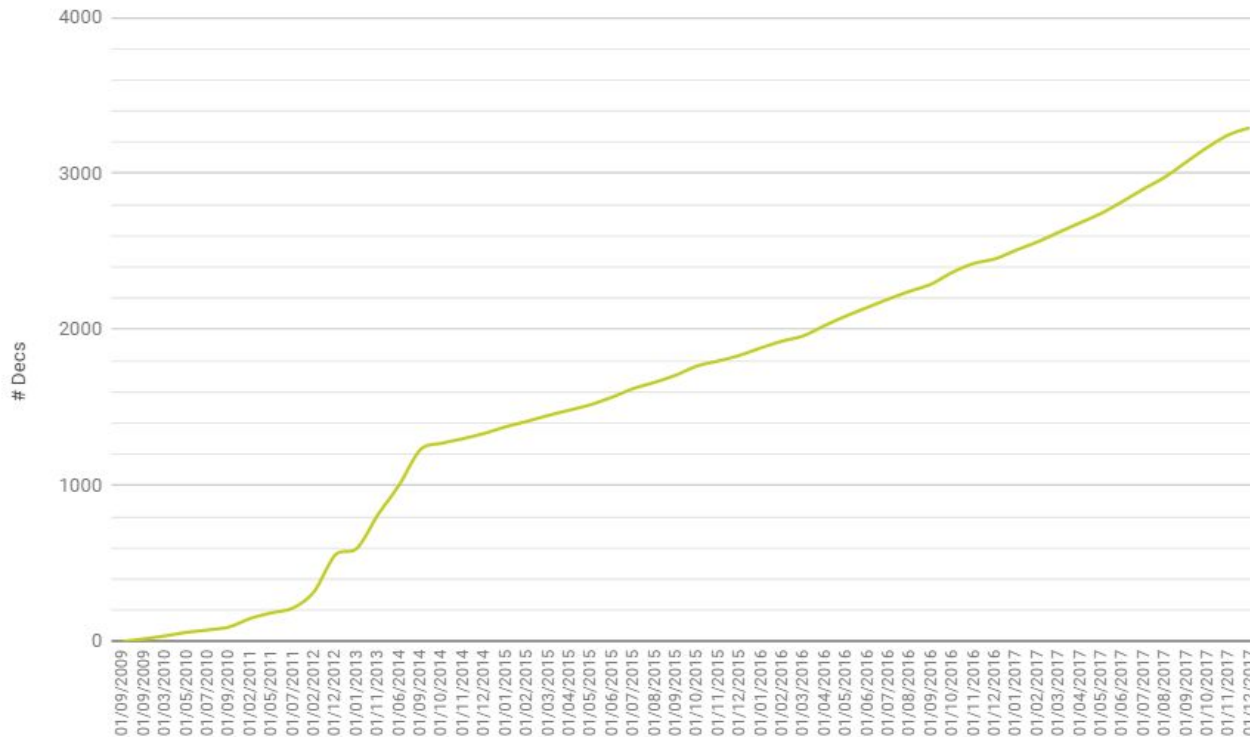


Vol. Materials
=
56,106,448m³

Since launch in Sept 2008 to end 2017:

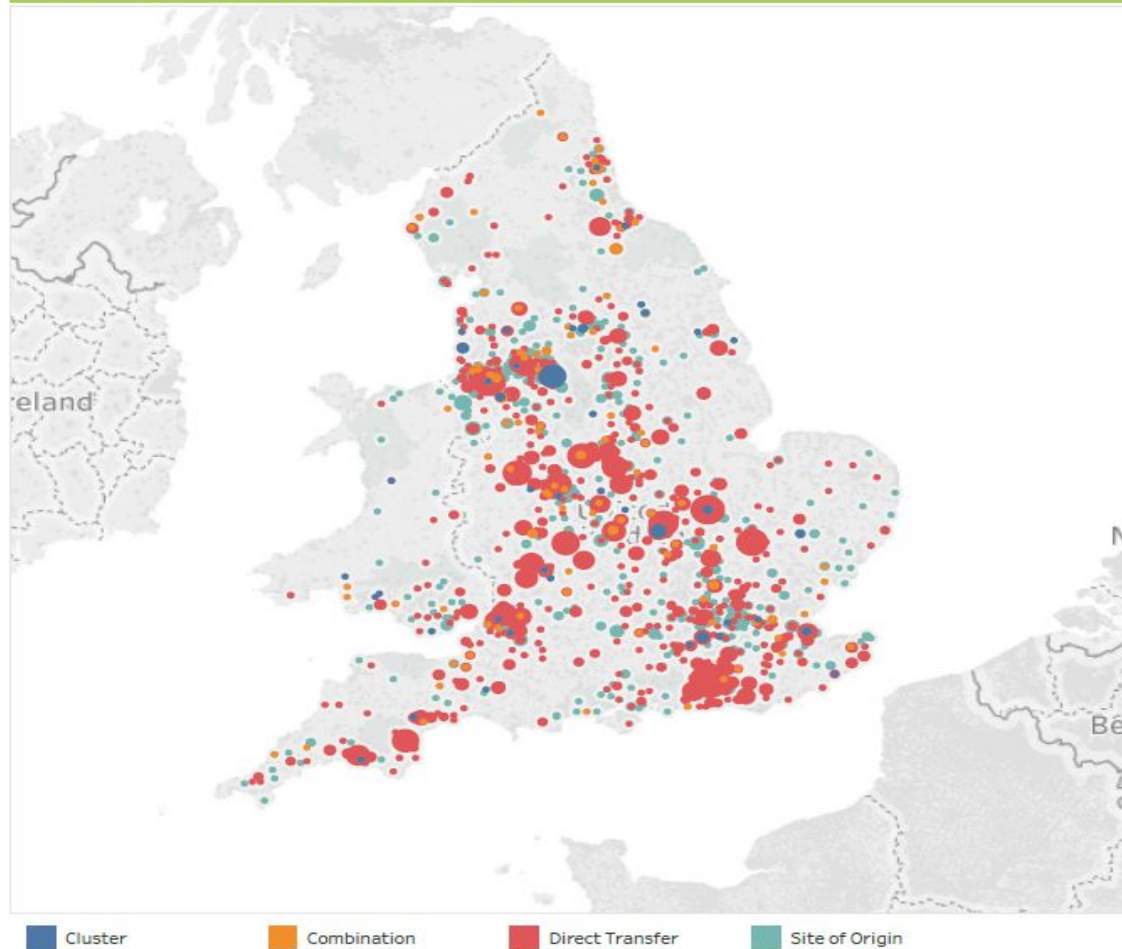
DoW CoP Adoption

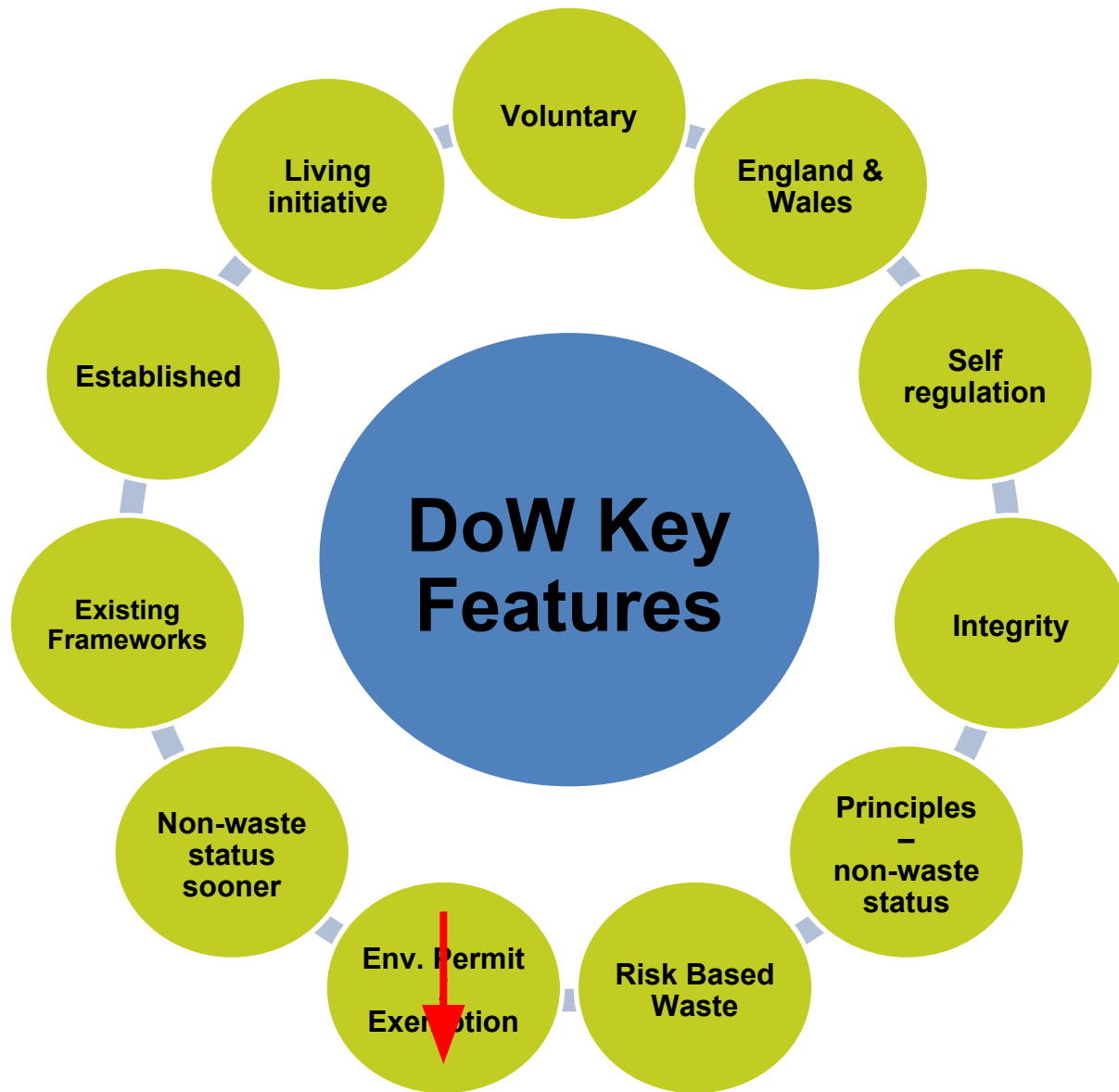
Declarations over time



DOW Data as of: 29/09/2017

Map of DOW projects (2014-2017)





If we could do it all again....?

- Introduction of fees
- Standards, standards, standards
 - Qualified Persons
 - Users
 - Regularised auditing
- Negative value materials
- Greater ambition - the original mission
- Look to other industries



www.claire.co.uk/cop

**Nicholas
Willenbrock**

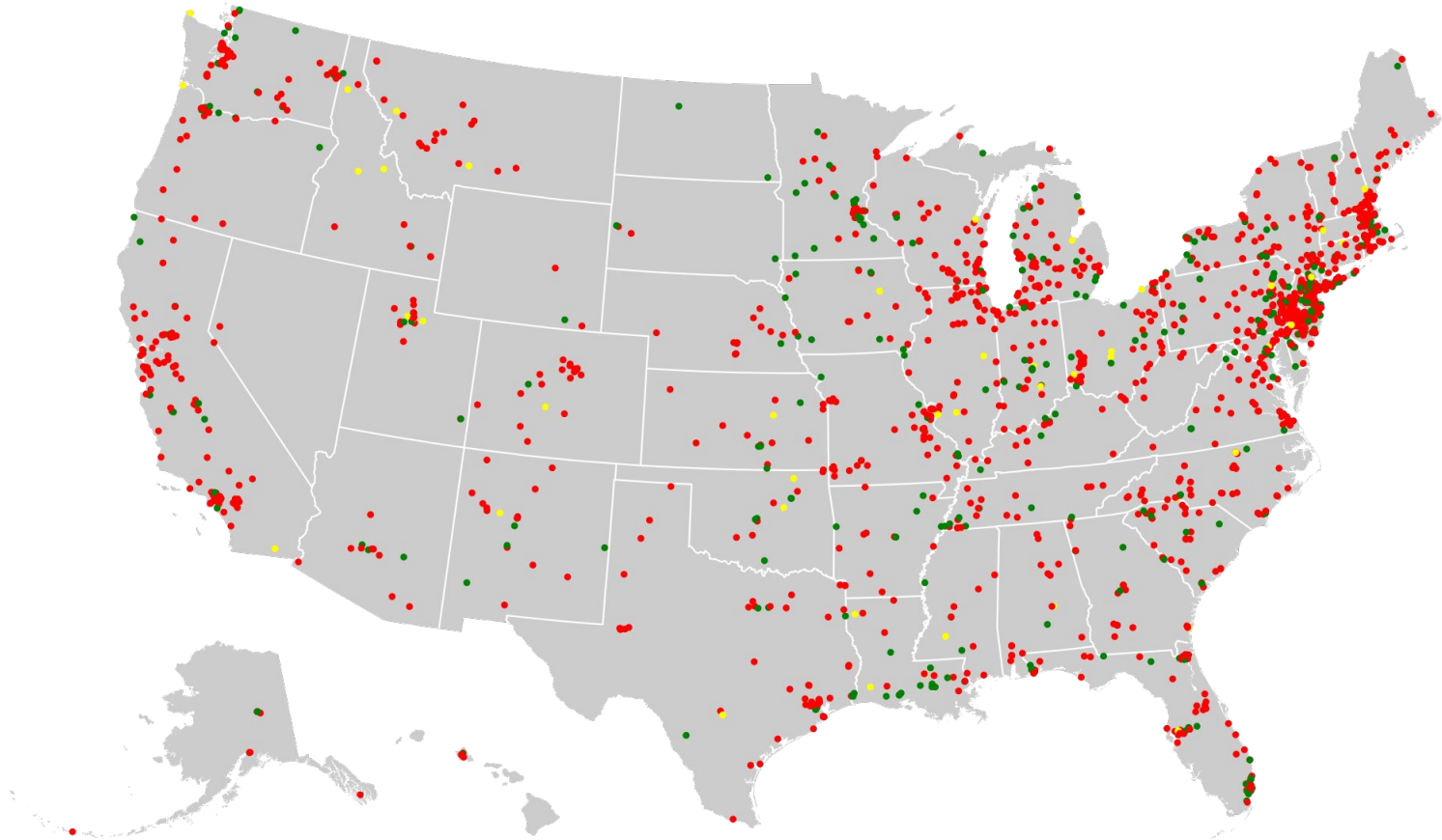
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Applying the CL:AIRE Model in the U.S.



Questions / Comments?



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Feb 14 - U.S. Models (Part II)

Presenters:

- Kevin McCarty GEI Consultants (New York)
- Amy Hadiaris, Minnesota Pollution Control Agency
- Brooke Furio, U.S. EPA - Cleveland
- David Emerman Ohio EPA
- Lee Ilan, NYC Mayor's Office of Env Remediation
- Daniel Walsh, NYC Mayor's Office of Env Remediation

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