

# Local Authority Requirements

**Reduce Risk...**

**Navigate the planning system....**

**... and sell houses more quickly**

Fabia Pollard RSoBRA, Scientific Officer

Borough Council of  
King's Lynn &  
West Norfolk



# Best practice for cover systems

- National Planning Policy framework
- Land Contamination Risk Management
- Local Guidance
- What the contaminated land officer looks for
- Who is responsible for what?
- How to discharge conditions



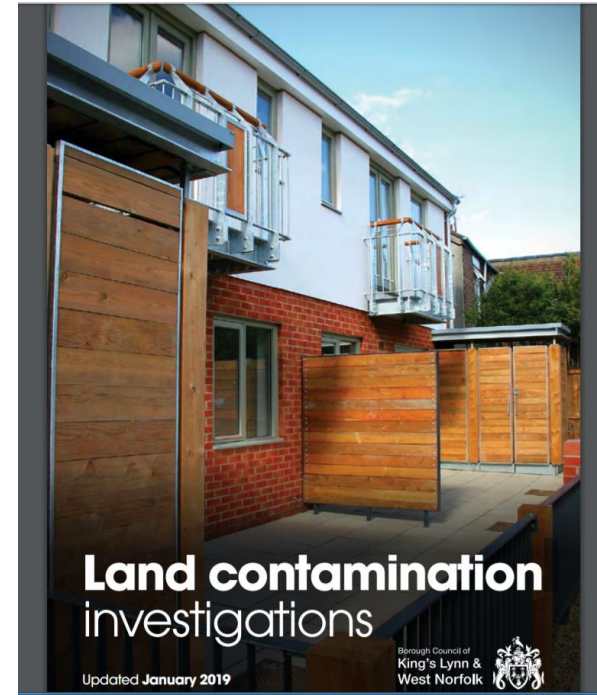
# National Planning Policy Framework

- Prevent unacceptable risk from, or adverse affects of unacceptable levels of soil pollution
- Ensure that a site is suitable for proposed use taking account of ground conditions and any risks from contamination
- As a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990
- Adequate site investigation information, prepared by a competent person, is available to inform these assessments.



# National Planning Policy Framework

- Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the **developer and/or landowner**



# Land Contamination Risk Management

## LCRM October 2020

- The Environment Agency expects you to follow this guidance to manage the risks from land contamination.
- Local authorities may also provide additional guidance.
- Gov.uk

Guidance

### **Land contamination risk management (LCRM)**

How to assess and manage the risks from land contamination.

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Published 8 October 2020  
From: [Environment Agency](#)

Borough Council of  
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West Norfolk



# LCRM: for all

- Relevant to all managing land contamination.
- landowners, financiers
- regulators
- developers
- planners
- consultants & remediation contractors
- **We expect that the person responsible for applying LCRM is appropriately competent in the tasks they are doing for each stage.**



# LCRM: Competent Person

NPPF definition. Appropriate knowledge, skills, experience and qualifications of particular area including:

- a Suitably Qualified Person (SQP) registered under the NQMS
- the Society of Brownfield Risk Assessment (SoBRA) accreditation scheme
- a Specialist in Land Contamination (SiLC)
- membership of a professional organisation relevant to land contamination
- a proven track record of dealing with land contamination



# LCRM: National Quality Mark NQMS

- Voluntary scheme, admin by CL:AIRE. Environment Agency and SoBRA support its use. Can provide increased confidence and ensure that reports are of suitable the quality.
- Uses a SQP who is an experienced land contamination professional to quality check land contamination reports. They will:
  - verify that all factual and interpretative information meets the required technical and regulatory standards
  - provide a declaration that the reports have been checked and verified under the scheme
- **Please put in chat if you use NQMS, or regulators, if you've seen NQMS reports**





# LCRM: 4 Guides, 3 Stages

- LCRM is made up of 4 guides:
- Before you start,
- Stage 1 Risk assessment,
- Stage 2 Options appraisal,
- Stage 3 Remediation and verification.

# LCRM: Stage 1

- Stage 1: Risk assessment - 3 tiers:
  - 1 Preliminary risk assessment.
  - 2 Generic quantitative risk assessment.
  - 3 Detailed quantitative risk assessment.
  - Includes information for intrusive site investigations.

# LCRM: Stage 2

- Stage 2: Options appraisal
  - There are 3 **steps** to follow.
  - Identify feasible remediation options.
  - Do a detailed evaluation of options.
  - Select the final remediation option.
  - Cover system?



# LCRM: Stage 3

- Stage 3: Remediation and verification
  - There are 4 **steps** to follow.
  - Develop a remediation strategy.
  - Remediate.
  - Produce a verification report.
  - Do long term monitoring and maintenance, if required.

# LCRM: Stage 3

- Stage 3: Remediation and verification
  - **Develop a remediation strategy.**
  - Remediation plan, Remediation method statement
  - Single remediation strategy that deals with whole site
  - Clear set of remediation activities and how you will implement and verify them. How you will meet and carry out the remediation objectives
  - Flow chart



# LCRM: Sustainable Remediation

Potential to cause environmental, economic and social impacts. Address this by showing:

- the benefit of doing remediation is greater than its impact
- balanced decision making process to select the optimum remediation solution
- remediation manages the unacceptable risks in a safe & timely manner. Maximise the overall environmental, social and economic benefits across whole supply chain.

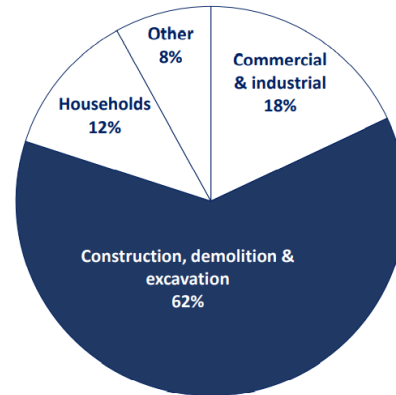


# Why sustainable?

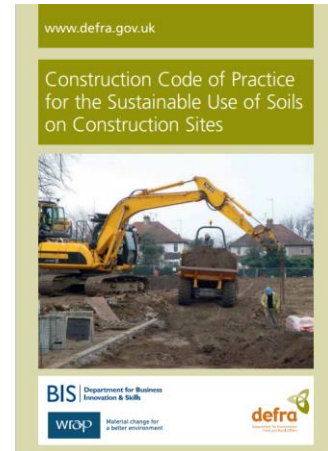
- COP 26, Env Act 2021, OEP
- Protect, restore and promote sustainable use of terrestrial ecosystems, halt and reverse land degradation and halt biodiversity loss
- CIRIA RP1124 Sustainable management of surplus soils and aggregates - Toolkit



**SUSTAINABLE DEVELOPMENT GOALS**  
17 GOALS TO TRANSFORM OUR WORLD



Source: UK statistics on waste (2016), DEFRA



# LCRM: Verification

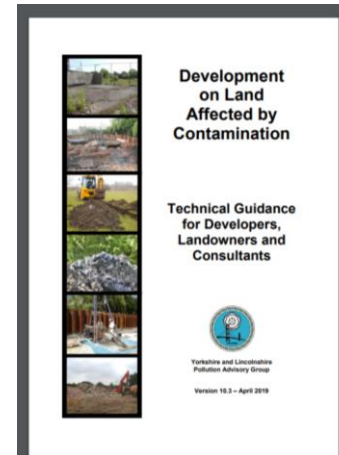
- When remediation is complete, you will need to produce a verification report.
- Demonstrates that the risk has been reduced and that the remediation objectives and criteria have been met. Include lines of evidence approach as set out in your verification plan.
- The verification report will need to provide a complete record of all remediation activities and evidence that it has been successful.





# Local Authority Guidance

- Standards and guidance
- Promotes consistency
- Norfolk uses work carried out with YALPAG
- National Contaminated Land Officers Group NCLOG



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# What we need to see – capping/cover

- [www.west-norfolk.gov.uk/planning-on-contaminated-land](http://www.west-norfolk.gov.uk/planning-on-contaminated-land)
- Guidance is intended to improve the quality of reports submitted to Local Authorities and give contractors & consultants a point of reference to obtain approval for such work from their client.
- Does not cover the geotechnical suitability of soils or material or chemical suitability that does not affect human health e.g. sulphates
- Materials brought onto a development site for gardens or soft landscaping are suitable for use and do not present harm to people, the environment and/or property.



# What we need to see

## Phase 3 Watch points:

- Obtain and keep details of the removal and correct disposal of contaminated material from the site.
- Obtain details of the imported soils. Ensure that test records from the supplier apply to the soil physically intended for importation.
- Imported soil should be sampled once it has been laid on the site to support the analysis provided by the supplier.



## Phase 4 - Verification and Validation

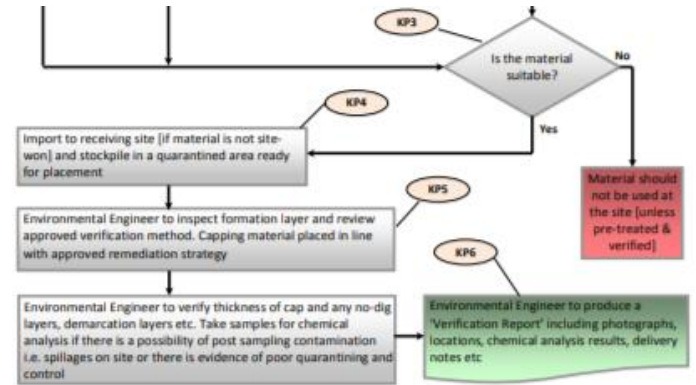
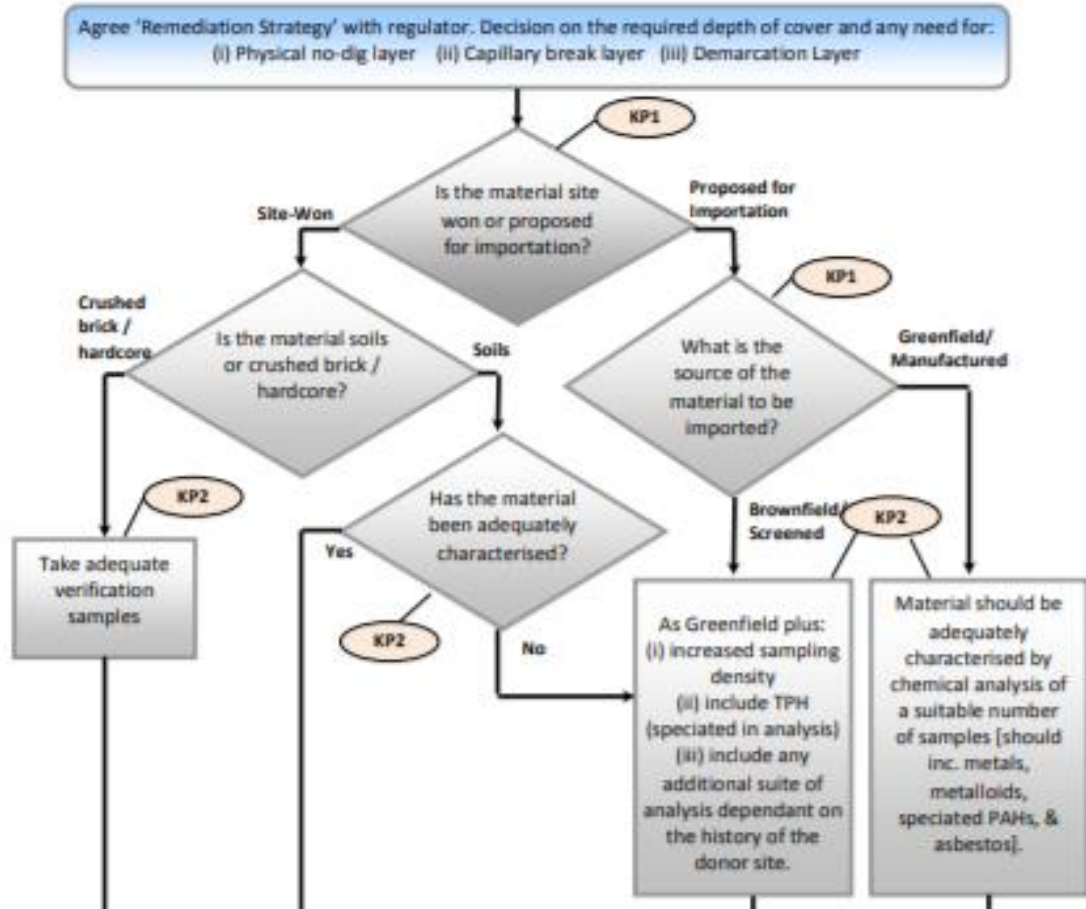
A verification or validation report is required when the remediation is complete to prove it is effective. Its content will have been agreed in advance as part of the RMS (above).

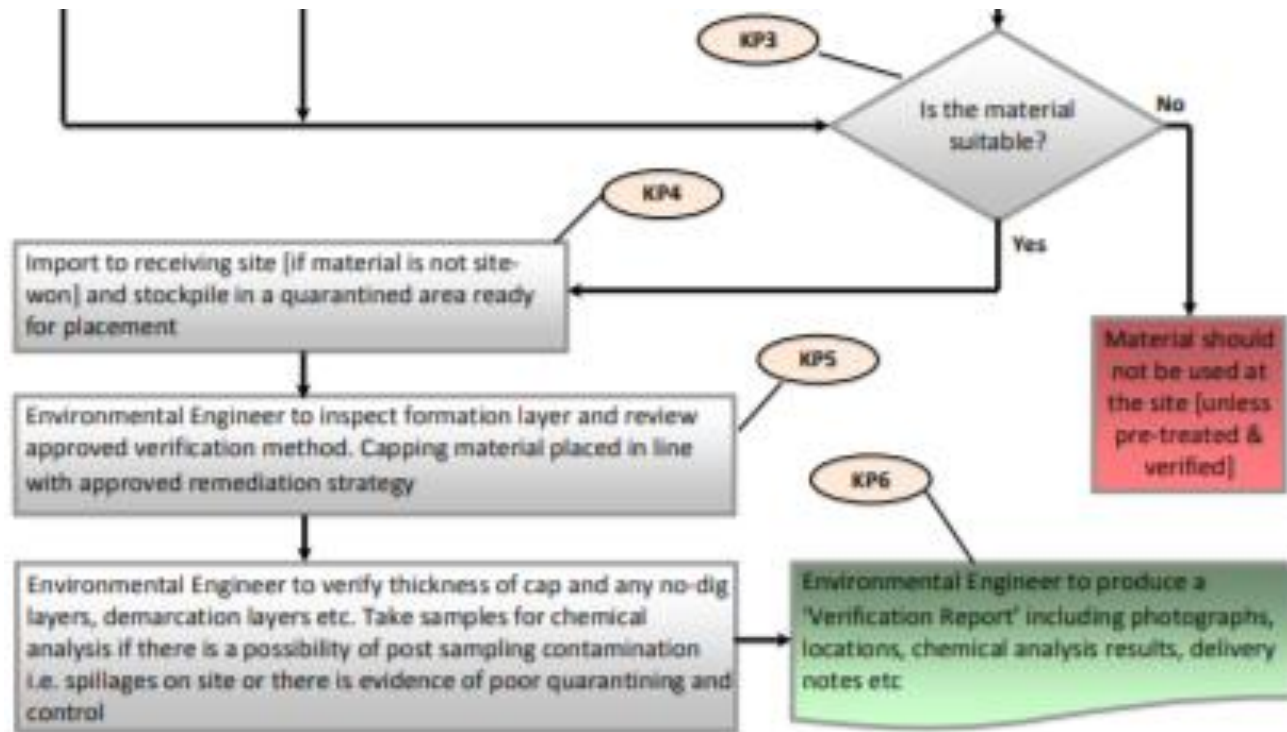
Your verification/validation report should include:

- Evidence that all of the agreed remediation actions are complete and details of who carried out the work;
- Details of any changes made to the RMS and why they were required;
- Verification data including in situ testing and laboratory test results with appropriate interpretation and analysis of the results;
- Plans, as built drawings and photographs demonstrating the work carried out;
- Key items of correspondence, meeting or site visit notes. Waste transfer notes and certificates for topsoil;
- Details of any ongoing verification or long term management;
- Confirmation that remediation objectives have been met and the site's status at completion of the work.

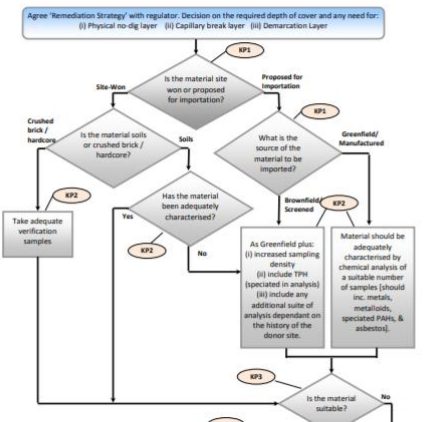


# Overview Flowchart





Overview Flowchart





# What we need to see

## Appendix 1a – Sampling & Testing Matrix

Type	Number of Samples	Testing Schedule	Assessment Criteria
Virgin Quarried Material	1 or 2 depending on the type of stone utilised, to confirm the inert nature of the material.	Standard metals/metalloids (should include as a minimum As, Cd, Cr, CrVI, Cu, Hg, Ni, Pb, Se, Zn)	This needs to be agreed with the Local Authority. The Assessment criteria needs to be UK based, e.g. LQM S4UL's, Defra C4SL's or other similarly derived GAC's.
Crushed Hardcore, Stone, Brick	Minimum 1 per 1000m <sup>3</sup>	Standard metals/metalloids (As above) PAH (16 USEPA speciation) Asbestos	
Greenfield/ Manufactured Soils	Minimum 3 or 1 per 250m <sup>3</sup> (whichever is greater)	Standard metals/metalloids (As above) PAH (16 USEPA speciation) Asbestos	
Brownfield/ Screened Soils	Minimum 6 or 1 per 100m <sup>3</sup> (whichever is greater)	Standard metals/ metalloids (As above) PAH (16 USEPA speciation) TPH (CWG banded) Asbestos Any additional analysis dependant on the history of the donor site.	

## Appendix 1b – Questions to Ask Your Soil Supplier Relating to Soil Quality

- What is the source of the material (refer to KP1)?
- Will all of the material be coming from the same source?
- Are you satisfied that the material is a suitable growing medium for the proposed end use?
- Has the supplier used an appropriate sampling protocol to ensure a representative sample is analysed? What volume of soil is represented by the analysis and does it comply with Appendix 1a?
- Does the testing include analysis of contaminants identified in Appendix 1a?
- Does the laboratory conducting the analysis have UKAS and MCERTS accreditation for the tests they are carrying out?
- Can I have a copy of the whole analysts report and does it include an interpretive section?
- Will the provided certificate be dated within the last 2 months?

Verification Requirements for Cover Systems

YALPAG Technical Guidance for Developers, Landowners and Consultants

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# What we need to see

## Appendix 2 – Checklist for Verification Reports

**Example only. Not to be considered as typical minimum requirements. Additional information should be included for non cover systems aspects of the remediation i.e. gas protection measures etc.**

Site Details	
Site Name / location	
Developer name	
Development use	
Plot No / description of landscaped area (inc plan of inspection areas)	
National Grid Reference	
Inspection visit date	
Supporting Evidence	
Description of remediation (as per agreed Remediation Method Statement including depths / thickness checks, topographical readings)	
Material tracking information (including way tickets etc)	
Name of groundwork's remediation contractor	
Name of supervising environmental consultant	
Site Specific chemical analysis results	
Verification Photographs (inc. remarks)	
Recommendations	

Recommendations	
Pass / fail	
If material fail, how will this be managed i.e. removed, treated	
Detail any further remedial works and / or inspection	
Signed off	

**Failure to provide any of the above information may prevent planning conditions from being discharged.**



# What the planning authority looks for

- Any conditions are necessary, reasonable and enforceable
- Adequate information to discharge conditions
- LPA will have regard to technical advice from the contaminated land officer
- Have the requirements of the conditions been met? Public Record





# What the contaminated land officer looks for – Key elements

- Check against LCRM
- Stage 1 Desk study, screening assessment, preliminary risk assessment  
Detailed site investigation and risk assessment;
- Stage 2 options appraisal
- Stage 3 Remediation, post remediation verification testing and report.



# What the contaminated land officer looks for – Key elements

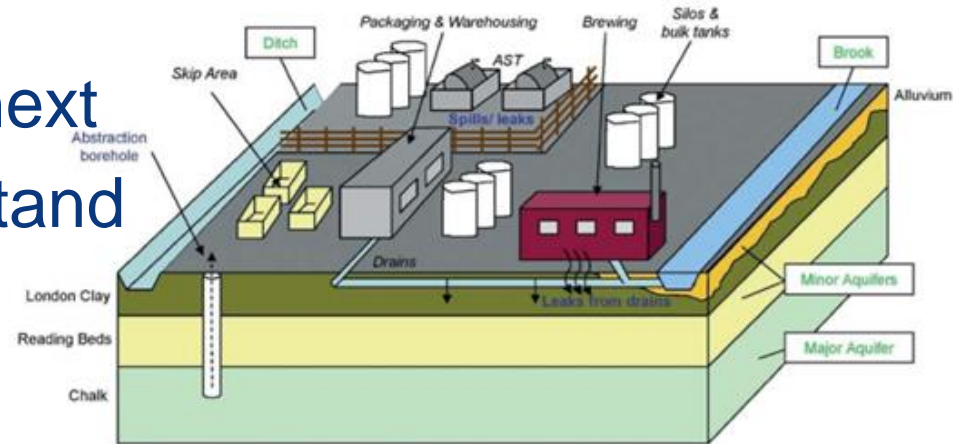
- Check against LCRM
- Stage 1 Desk study, screening assessment, preliminary risk assessment  
Detailed site investigation and risk assessment;
- **Stage 2 options appraisal**
- **Stage 3 Remediation, post remediation verification testing and report.**



# Conceptual site model is key

- Iterative process
- Each stage informs the next
- CSM tells us you understand the site
- Tells you what needs to be done

Figure 1.2 Example initial conceptual site model



# CSM is key

- Remove source
- Break pathway
- Don't put the receptor there?

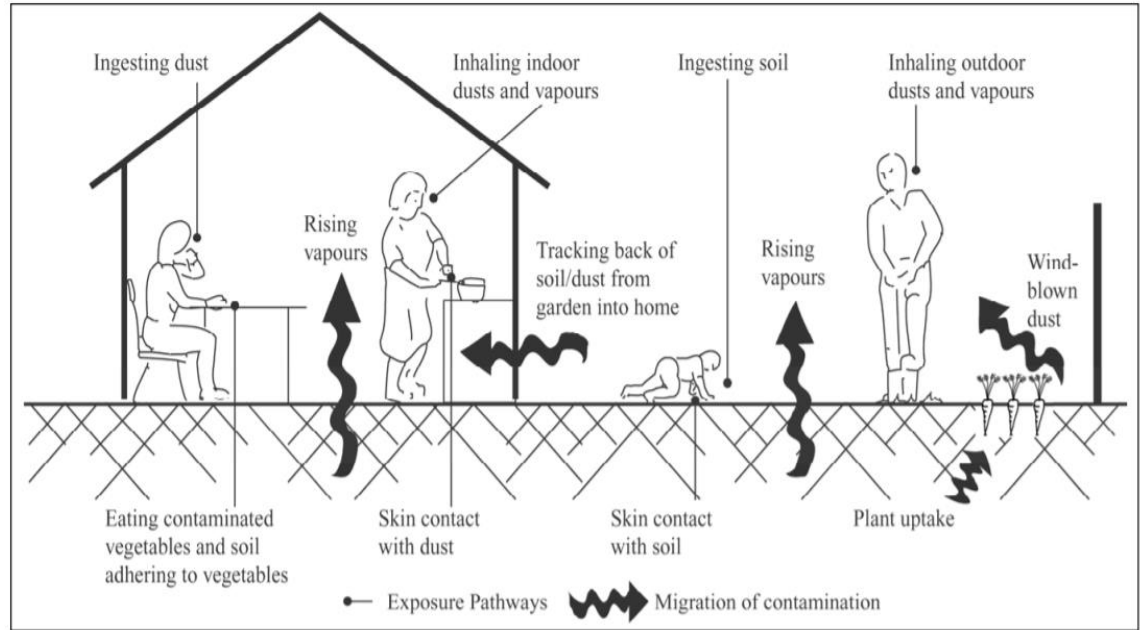


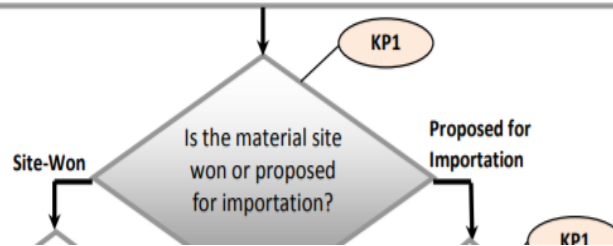
Figure 2.1: Illustration of the potential exposure pathways in the CLEA model

# Cover system breaks the pathway

- Design based on CSM

## Overview Flowchart

Agree 'Remediation Strategy' with regulator. Decision on the required depth of cover and any need for:  
(i) Physical no-dig layer (ii) Capillary break layer (iii) Demarcation Layer



# Who is responsible for what?

- LA, Agent, Developer, Contractor, Consultant
- Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner
- If remediation is not effective the site could be investigated under Part 2A EPA 1990
- Recent example



# Case study 1 18/01047/DISC\_B

- Site for single house
- Farmhouse & buildings
- HGV vehicle garage & yard
- Elevated metals, direct exposure pathway
- Remediation agreed
- Simple remediation by excavation and importation of clean cover



# Case study 1 - Magdalen

- Planning consent conditioned
  - The approved remediation scheme must be carried out.
  - Following completion of the measures, produce a verification report that demonstrates the effectiveness of the remediation
- Work done, verification report submitted



# Case study 1 - Magdalen

- Discharge of conditions
- Photographs and email
- Details of soil used
- Correspondence
- What happened here?

# Case study 1 – Verification Report

- Reported that client undertook the remediation works: excavation and removal of unsuitable surface made ground soils (20th Feb 19)
- Topsoil stockpiled in the garden & landscaped areas (22nd Feb)
- Completed excavation reported to have been observed by a Geoenvironmental Engineer (4th Mar)
- Imported topsoil from British Sugar was stockpiled in the garden areas and was sampled.
- Laboratory analysis reported that the contaminants of concern were below the relevant screening criteria in the samples.
- The verification report concludes that imported topsoil is suitable for use in a residential setting.



# Case study 1

- Needs to meet requirements of condition:
- Verification report stated that the client has documents to show that the excavated material was removed from site. We need to see these. Was unsuitable material removed to the required depth?
- Quantities of soil imported to site?
- Depth of the cover material?



**Photographs from Remediation Excavation on 20<sup>th</sup> February &  
British Sugar Import on 22<sup>nd</sup> February 2019**



Date:  
04/03/19

Hole Size: 70mm dia to 1.00m

Ground  
Level:

(Date)  
Water

Description of Strata

Legend

Depth  
m

O.D.  
Level  
m

IMPORTED TOPSOIL - Light brown, fine sandy SILT.



1.00

Hole completed at 1.00m depth



Sandy Lane  
Blackborough End  
Kings Lynn  
NF  
PE32 1SE  
williamgeorge.sg.ltd@outlook.com  
VAT Registration No.: 280215920



## VAT Invoice

INVOICE TO  
KEW GRASSCARE  
BOW TREES  
SADDLEBOW  
KINGS LYNN  
NORFOLK  
PE34 3AS

INVOICE NO. 2097  
DATE 28/02/2019  
DUE DATE 20/03/2019

DATE	SERVICE	ACTIVITY	VAT	QTY	RATE	AMOUNT
20/02/2019	TIPPING	COLLECTED FROM MAGDELAN 5416	20.0% S	2	150.00	300.00
22/02/2019	TOPSOIL	(D) MAGDELAN 2614,15,16	20.0% S	55.40	19.50	1,080.30
22/02/2019	TIPPING	COLLECTED FROM WIGGENHALL ST MARY 5194,95	20.0% S	2	150.00	300.00
22/02/2019	10mm GRAVEL	EXPIT 2695	20.0% S	1	32.00	32.00
26/02/2019	TOPSOIL	WISSINGTON TO MAGDELAN 2703	20.0% S	18.80	19.50	366.60

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# Case study 1

- Invoice for
  - 4 loads collected from Magdalen for tipping (no quantities)
  - 55.40 topsoil from a location to Magdalen
  - 18.80 topsoil Wissington to Magdalen
- No quantities are given for the material removed from site. (This should be covered by waste transfer notes). I assumed that the topsoil loads are in tonnes of the British Sugar topsoil referred to in the verification report.





Gravel  
Topsoil  
Hardcore  
Carstone  
Lorry Hire  
Bulk Bags



Acacia House, Blackborough End,  
King's Lynn, Norfolk PE32 1SE  
Tel: 01553 640 288 - 07799 690802

Ticket No. 2616

Delivery Note  
&  
Waste Transfer

Customer	Date	Order Number
KEW GRASSCARE	26 2 11	
	Time on Site / Loaded	Time on Site / Tipped
Delivery Address	Material (if waste material - see waste transfer below)	
Wiggen St Mary	Top Soil Wissey	
Haulier	WEIGHBRIDGE WEIGHTS	Gross
OWN		Weightbridge Signature
Vehicle Reg No. GLOS YUJ		Tare
Drivers Name Rob Huxon		Driver Signature
	Nett	
	15 Ton	
WASTE TRANSFER NOTE		
Print Customer Name	Waste Description	Waste Origin
Customer Signature		
Lorry Hire	Start Time	Return Load <input type="checkbox"/> YES <input type="checkbox"/> NO

Environment Agency Standard  
Rules Permit - SR2010N012

William George Sand & Gravel Ltd.  
Permit Number: EPR/FB3407KN



Office Address: Acacia House, Sandy Lane, Blackborough End, King's Lynn, Norfolk PE32 1SE  
Site Address: Quarry Off Mill Drive, Blackborough End, King's Lynn, Norfolk PE32 1SW  
Tel: 01553 640288 Mob: 07799 690 802

Ticket No. 5202

Waste Acceptance  
&  
Transfer Note

Customer Name:	Date:	Order Number:
KEW GRASS CARE		
	Time On Site:	Time Off Site:
Waste Carriers Details:	Waste Origin Details:	
Name / Company: Same as Above	Name / Company:	
Address:	Address:	
Contact No.:		
Vehicle Reg No: GLOS YUJ	Origin Sic Codes - Tick Appropriate	
Drivers Name: Rob Huxon	<input type="checkbox"/> 41100 <input checked="" type="checkbox"/> 4201 <input type="checkbox"/> 4202 <input type="checkbox"/> 42110 <input type="checkbox"/> 42120 <input type="checkbox"/> 42130 <input type="checkbox"/> 42210 <input type="checkbox"/> 42220	Development of Building Projects Construction of Commercial Buildings Construction of Domestic Buildings Construction of Roads & Motorways Construction of Railways & Underground Construction of Bridges & Tunnels Construction of Utility Projects for Fluids Construction of Utility Projects for Electricity & Communications Construction of Water Projects Construction of other Civil Engineering Projects Demolition Site Preparation Test Drilling & Boring Paving Floor & Wall Coverings Other Building & Completion Roofing Activities Other Specialised Construction Activities
Waste Carriers Reg No: C806 42628	<input type="checkbox"/> 42910 <input type="checkbox"/> 42990 <input type="checkbox"/> 43110 <input type="checkbox"/> 43120 <input type="checkbox"/> 43130 <input type="checkbox"/> 43310 <input type="checkbox"/> 43330 <input type="checkbox"/> 43360 <input type="checkbox"/> 43380 <input type="checkbox"/> 43390	Construction of other Civil Engineering Projects Demolition Site Preparation Test Drilling & Boring Paving Floor & Wall Coverings Other Building & Completion Roofing Activities Other Specialised Construction Activities
Weightbridge Section <small>Subject to Weighbridge &amp; Operator Lic 1200 Governance Protocol Air 100</small>	Gross:	Weightbridge Signature:
	Tare:	
	Nett:	Drivers / Waste Carrier Signature:
	15 Ton	
Waste Observation & Written Description	Pricing Guide - Please Tick	Tick Appropriate
	<input type="checkbox"/> 1 <input type="checkbox"/> 4	<input type="checkbox"/> 170101 Concrete <input type="checkbox"/> 170102 Bricks <input type="checkbox"/> 170107 Concrete, Bricks, Tiles, Ceramics <input type="checkbox"/> 107302 Asphalt Mixtures <input checked="" type="checkbox"/> 170504 Soil & Stones <input type="checkbox"/> 010409 Waste Sand
		European Waste Codes





- 1 - Topsoil 18 ton delivery
- 2 - WTN 18 ton 170504 soils and stones
- 3 - Topsoil 18.8 ton delivery
- 1.2 - Topsoil 18 ton delivery (marked Wissey)
- 1.3 - Topsoil 18.6 ton delivery
- 2.1 - WTN 18 ton 170504 soils and stones
- 2.2- WTN 18.1 ton 170504 soils and stones
- 2.3 - WTN 18 ton 170504 soils and stones
- 3.1 - Topsoil 18.6 ton delivery



- The Verification Report reported that the client excavated and removed unsuitable material
- Completed excavation was observed by geoenv engineer during their verification site visit.
- Calculated that the WT notes and topsoil documents refer to 72.1 tons of material removed from site and 92 tons of topsoil imported.



# Case study 2

**From:** Bowers

**Sent:** 13 September 2019 11:14

**To:** Search

**Subject:** [DPS:88:SAL0001/002:F] Kings Lynn PE30 5GE

**Importance:** High

I am not sure if you can help me on this one. I am acting on the sale of the above property. The buyer's environmental search has revealed that there may have been contamination I believe it was the former Muck Works. The buyer is saying that she will pull out unless we can provide her with evidence that there is no contamination. We have explained to the solicitors and estate agents that the planning permission would not have been granted if there were any issues but the buyer is not satisfied. Is there any written documentation with the planning documents which confirms that there are no contamination issues.

I would be most grateful (yet again!) to receive any help on this one.

Kind regards

**Chartered Legal Executive**



# Case study 2



Photograph of frontage of Plots 13 to 18 (soft landscaping areas unavailable for validation (07-05-14))



Photograph of existing topsoil stockpile (for placement in soft landscaping to front of Plots 11-18)

# Case study 2



Soft Landscaping Area Adjacent to Road - In Front of Plots 15/16



Plot 16 Soft Landscaping Formation Pre Topsoil Placement

# Case study 2

- Stockpile testing
- Post placement analysis

MCEKTS Preparation							
SAL Reference		394134 001	394134 002	394134 003			
Customer Sample Reference		Topsoil 1 (stockpile)	Topsoil 2 (stockpile)	Topsoil 3			
Date Sampled		07-MAY-2014	07-MAY-2014	07-MAY-20			
Type		Topsoil	Topsoil	Topsoil			
Determinand	Method	Test Sample	LOD	Units			
Moisture	T277	AR	0.1	%	7.9	8.9	22
Moisture @ 105 C	T162	AR	0.1	%	8.5	9.9	23

SAL Reference: 394134 Project Site: 18No. Plots, Kings Lynn Customer Reference: 30078							
Soil Analysed as Soil							
Geodyne Suite 1							
SAL Reference		394134 001	394134 002	394134 003			
Customer Sample Reference		Topsoil 1 (stockpile)	Topsoil 2 (stockpile)	Topsoil 3			
Date Sampled		07-MAY-2014	07-MAY-2014	07-MAY-20			
Type		Topsoil	Topsoil	Topsoil			
Determinand	Method	Test Sample	LOD	Units			
Arsenic	T6	M40	2	mg/kg	8	9	9
Cadmium	T6	M40	1	mg/kg	<1	<1	<1
Chromium	T6	M40	1	mg/kg	11	12	15
Chromium VI	T6	AR	1	mg/kg	<1	<1	<1
Copper	T6	M40	1	mg/kg	13	13	11
Lead	T6	M40	1	mg/kg	22	23	15
Mercury	T6	M40	1	mg/kg	<1	<1	<1
Nickel	T6	M40	1	mg/kg	9	10	11
pH	T7	AR			7.6	7.9	7.8
Selenium	T6	M40	3	mg/kg	<3	<3	<3
Total Organic Carbon	T21	M40	0.1	%	0.8	1.0	2.2
Zinc	T6	M40	1	mg/kg	44	47	36

SAL Reference: 394134 Project Site: 18No. Plots, Kings Lynn Customer Reference: 30078							
Soil Analysed as Soil							
BTXG GRO MTBE							
SAL Reference		394134 001	394134 002	394134 003			
Customer Sample Reference		Topsoil 1 (stockpile)	Topsoil 2 (stockpile)	Topsoil			
Date Sampled		07-MAY-2014	07-MAY-2014	07-MAY-2			
Type		Topsoil	Topsoil	Topsoil			
Determinand	Method	Test Sample	LOD	Units			
Benzene	T209	M105	10	µg/kg	(12) <10	(12) <10	(13) <10
Toluene	T209	M105	10	µg/kg	<10	<10	<10
Ethylbenzene	T209	M105	10	µg/kg	<10	<10	<10
m,p-Xylene	T209	M105	10	µg/kg	<10	<10	<10
O-Xylene	T209	M105	10	µg/kg	<10	<10	<10
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	<10	<10	<10
Gasoline Range Organics	T84	M105	100	µg/kg	<100	<100	<100

Soil Analysed as Soil							
Geodyne TPH (CWG)							
SAL Reference		394134 001	394134 002	394134 003			
Customer Sample Reference		Topsoil 1 (stockpile)	Topsoil 2 (stockpile)	Topsoil 3			
Date Sampled		07-MAY-2014	07-MAY-2014	07-MAY-2014			
Type		Topsoil	Topsoil	Topsoil			
Determinand	Method	Test Sample	LOD	Units			
TPH (C6-C8 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100
TPH (C6-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C12-C16 aliphatic)	T206	M105	2	mg/kg	<2	<2	<2
TPH (C16-C21 aliphatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C21-C35 aliphatic)	T206	M105	4	mg/kg	<4	<4	<4
TPH (C35-C44 aliphatic)	T8	M105	1	mg/kg	<1	<1	<1
TPH (Aliphatic) total	T85	M105		mg/kg	N.D.	N.D.	N.D.
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C12-C16 aromatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C16-C21 aromatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C21-C35 aromatic)	T206	M105	1	mg/kg	<1	<1	<1
TPH (C35-C44 aromatic)	T8	M105	1	mg/kg	<1	<1	<1
TPH (Aromatic) total	T85	M105		mg/kg	N.D.	N.D.	N.D.
TPH (Aliphatic+Aromatic) (sum)	T85	M105		mg/kg	N.D.	N.D.	1.0

SAL Reference: 394134 Project Site: 18No. Plots, Kings Lynn Customer Reference: 30078							
Soil Analysed as Soil							
Total and Speciated USEPA16 PAH							
SAL Reference		394134 001	394134 002	394134 003			
Customer Sample Reference		Topsoil 1 (stockpile)	Topsoil 2 (stockpile)	Topsoil 3			
Date Sampled		07-MAY-2014	07-MAY-2014	07-MAY-2014			
Type		Topsoil	Topsoil	Topsoil			
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	<0.1	<0.1	0.2
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	0.2	<0.1	0.3
Pyrene	T207	M105	0.1	mg/kg	0.1	<0.1	0.3
Benzofluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Chrysene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzobkfluranthene	T207	M105	0.1	mg/kg	0.1	<0.1	0.1
Benzofluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Dibenzofluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzofluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
PAH(total)	T207	M105	0.1	mg/kg	0.4	<0.1	0.9



# Case study 2

- Condition discharged

## CONCLUSIONS

On the basis of the above information it is considered that the recommendations within our RMS have been generally adhered to within the soft landscaping areas of the development, and evidence of remedial capping placed within the soft landscaping has demonstrated compliance with the requirements of the RMS.

We therefore consider that the required remedial measures applicable to the soft landscaping areas within the 18No. plot development have been appropriately implemented.

## REGULATORY CONSULTATION

We would recommend that a copy of this validation letter is issued (by the Client) to the Local Planning Authority (BCKL&WN) and the NHBC for comment/approval, and to facilitate the discharge of the relevant planning condition for the development.

## COMMENTS

This letter concludes the validation works for the 18No. plot development, and no further validation works are considered to be necessary for the site.

We trust the above report is suitable for your current requirements; however should you have any questions or queries please do not hesitate to contact us.





# Case study 2

From: Fabia Pollard

Sent: 13 September 2019 16:07

Subject: RE: [DPS:88:SAL0001/002:E] Kings Lynn PE30 5GE

Due to the previous industrial use of the land, conditions were placed on planning permission requiring investigation and remediation of any contamination. This was carried out. The Environmental Quality Team were consulted on each stage of the works and received sufficient information to recommend that the conditions relating to contamination could be discharged. We do not intend to revisit the site under Part 2A of the Environmental Protection Act and do not consider the land to be contaminated land.

All reports and correspondence with planners is available on our website under planning reference 09/02010/F. I understand that during development the above address was identified as Plot X and the relevant discharge of conditions application was DISC\_M. I have attached the verification report from the public record.

regards

Fabia Pollard RSoBRA  
Scientific Officer  
Environmental Quality  
Environment & Planning





# Is the planning authority happy?

- **Include a description of the final site condition at completion and the final extent of remediation,**
- **the implications of the final site condition on the future use of the site**
- new development not at unacceptable risk from, or adversely affected by, unacceptable levels of soil pollution
- site is suitable for its permitted use



# Can I sell these houses?

- **lines of evidence used to verify completion - include how remediation objectives & criteria have been met**
- **an updated conceptual model to demonstrate that all pollutant linkages have been mitigated**
- Adequate information, prepared by a competent person
- Not capable of being determined as contaminated land under Part IIA EPA1990



# Can I sell these houses?

- Conditions discharged
- Public record
- Buyers happy
- Lender happy
- Good to go





[Home](#) > [Food, safety and environment](#) > [Pollution](#) > [Contaminated land](#) > [Planning applications on contaminated land](#)

## Planning applications on contaminated land

How to carry out a contaminated land assessment as part of a planning application

### Dealing with land contamination

Most development takes place on land that has already had one use. The [National Planning Policy Framework](#) (NPPF) sets out the government's policy on dealing with land contamination through the planning process. The NPPF states that:

- a development site should be suitable for its new use
- responsibility for securing a safe development rests with the developer and/or landowner

...The planning authority will take into account ground contamination if you must submit adequate site investigation as part of the application.

...To provide the information needed to support your application, you may need to hire an independent consultant.

You'll be asked if:

- the land is known to be contaminated
- contamination is suspected for all or part of the site, or
- the proposed use is particularly vulnerable to contamination

For any sites that have had a use that could cause contamination we'll need additional information with your planning application. Please see our tables for what we require.

Requirements for types of development on potentially contaminated land

Type of development	Submit with your planning application
New build	Desk study and preliminary risk assessment report
Site with previous agricultural use	Screening assessment form

### Sensitive developments

If the proposed use is particularly vulnerable to the presence of contamination, you'll need to submit the following with your application:

#### Recently visited pages

- Contaminated land
- Contaminated Land Part 2A

#### Related pages

- Advice for home buyers
- Contaminated Land Part 2A

# Land contamination investigations

Updated January 2019

Borough Council of  
King's Lynn &  
West Norfolk



Borough Council of  
King's Lynn &  
West Norfolk

