SEPA
Scottish Environment Protection Agency

Water Pollution Arising from Land Containing Chemical Contaminants

2nd edition 2012

1.0 Summary/Background/Scope

Contaminants can be dispersed in soil as a result of leaks, spillages, historical deposition of industrial by-products, reclamation of land using anthropogenic material, historic waste disposal activities and deposition from the atmosphere. Contaminants can then move from the soil source and enter the water environment and affect a receptor by a variety of routes. While all of these soil sources represent land contamination only some give rise to Contaminated Land as defined by Part IIA of the Environmental Protection Act 1990 and the Statutory Guidance.

In the Statutory Guidance Contaminated Land is identified where land is causing significant harm or significant pollution of the water environment (or there is a significant possibility of it causing significant harm or significant pollution).

Scottish local authorities are the lead regulator dealing with land contamination under Part IIA. They are responsible for assessing and identifying land as contaminated and are responsible for securing the remediation of such land. The decision as to whether or not significant pollution is occurring rests with local authorities, who are obliged to adopt an approach consistent with that adopted by SEPA and to consult with SEPA when making a determination regarding significant pollution of the water environment.

SEPA is responsible for securing remediation of contaminated land which has been designated a **special site** by virtue of matching one of the descriptions in the Contaminated Land (Scotland) Regulations 2000 (the Regulations).

Issues of pollution of the water environment associated with land contamination in relation to re-development are considered by the planning authority (Local Authorities), which consults with SEPA as required in accordance with agreed consultation routes.

This guidance provides information to third parties, including Local Authorities and environmental professionals, on how SEPA assesses whether significant pollution of the water environment is occurring, or is likely to occur, at a site. It replaces the withdrawn *"Water Pollution arising from land containing chemical contaminants"* (2001) and SEPAs *"interim advice on the measures of significant pollution"* (2006). Its purpose is to provide a generic overview and to act as a pointer to other references in pursuing a site-specific approach to risk assessment of the water environment. Figure 1 illustrates some of the ways that a source may give rise to significant harm or significant pollution.

This document is only applicable in Scotland and is specifically aimed at land in Scotland which is being assessed or dealt with under Part IIA of the Environmental Protection Act 1990. This document is, by necessity, generic, and readers will need to refer to other publications for detail on specific aspects relating to any individual site. Third parties should always seek their own advice on matters of legal, as well as technical interpretation.

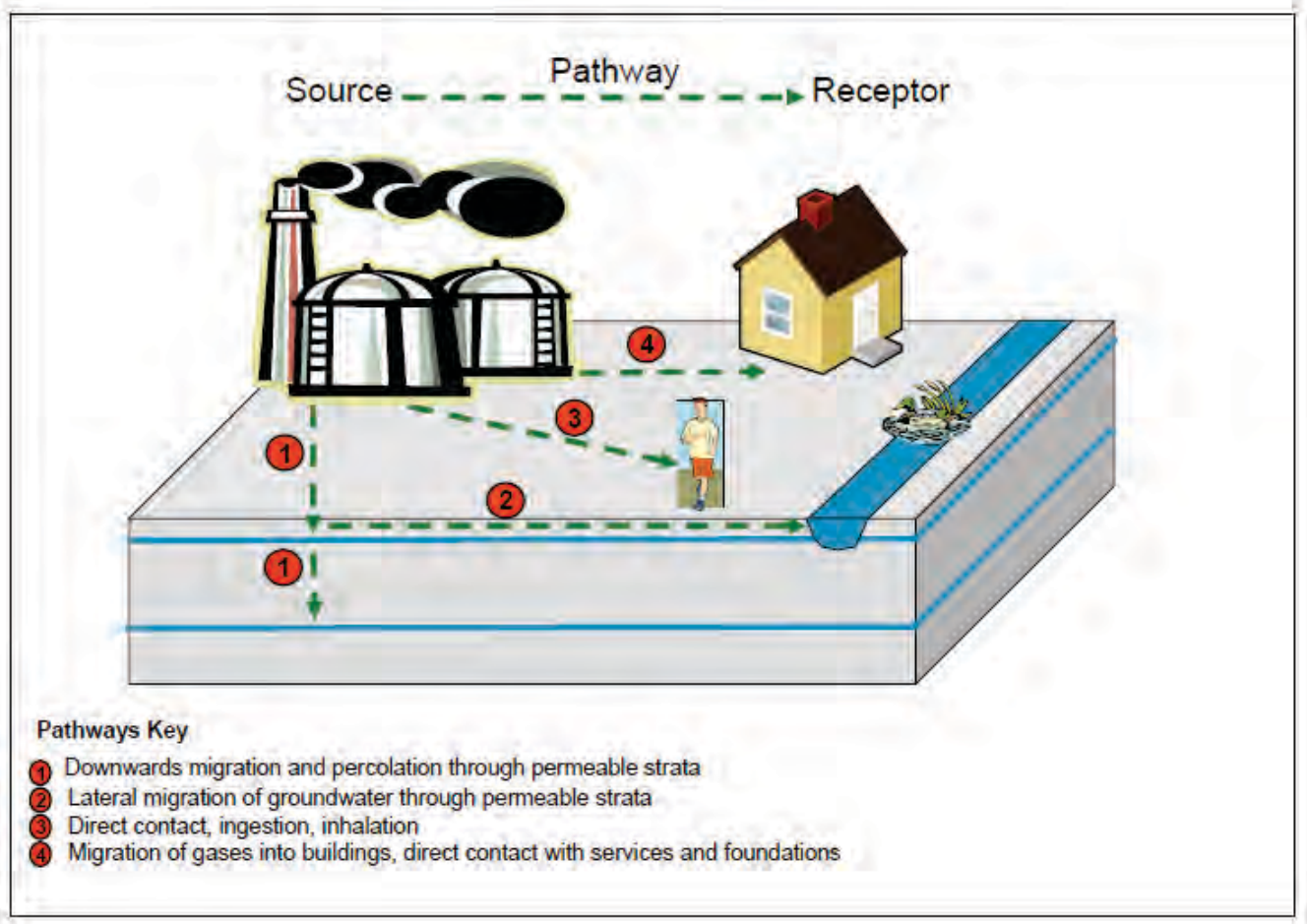

Figure 1 – Significant harm and significant pollution

1.1 Contaminated Land in the Wider Context

Part IIA of the Environmental Protection Act 1990 is the primary legislation governing contaminated land, as supported by the associated Part IIA Contaminated Land Statutory Guidance. However, the guidance provided here may also be useful in other contexts, in particular when considering any risks associated with land subject to planning controls. Planning Advice Note (PAN) 33 indicates that where there are unacceptable risks to human health and the environment, land remediation will be required before the new use commences (paragraph 19 (ii)) and highlights that it is in a developer's interest to avoid the scenario where land is identified as Part IIA contaminated land after development (paragraphs 74 and 75).

Part IIA and the planning regime are the main mechanisms for dealing with water pollution arising from historical land contamination. However, in some cases remediation may be achieved through other regimes. 78YB of Part IIA provides certain exclusions from Part IIA requirements where remediation would be regulated through another regime, e.g. PPC[1], CAR[2].

It is worthy of note that Part IIA may provide remedies to address pollution, which may not be available under other regimes. Therefore, subject to the exclusions under Section 78YB, Part IIA may sometimes be the only practical route to securing remediation at a given site.

[1] Pollution Prevention and Control Regulations (Scotland) 2000

[2] The Water Environment (Controlled Activities) (Scotland) Regulations 2011

The Water Framework Directive (2000/60/EC) (WFD), through WEWS 2003[3], is being taken forward by competent authorities[4] in Scotland. Two of the four key aims of the WFD are: to prevent deterioration and enhance status of aquatic ecosystems, including groundwater; and to reduce pollution.

These aims are to be delivered through the River Basin Management Planning Process via a number of key work areas, including the continuation of "business as usual" regulatory regimes (such as Part IIA and Planning). RBMP emphasis is on setting environmental objectives for all waterbodies, and programmes of measures to achieve them. One key measure to achieve the objectives for land contamination is via regulatory regimes such as Part IIA and Planning. Closer interactions in this area are expected to develop as the timetable for action, set by WFD, is pursued. Further information on River Basin Management Planning can be found on SEPA's website.

[3] The Water Environment and Water Services (Scotland) Act 2003

[4] For the purposes of WEWS, these include Scottish Ministers, SEPA and Local Authorities

2.0 Legislative Context and Interpretation

2.1 Water pollution within the definition of contaminated land

The concept of water pollution is important as it is one of the two reasons for land being identified as contaminated land by a local authority.

Part IIA of the Environmental Protection Act 1990 is the primary legislation governing contaminated land, as supported by Contaminated Land Statutory Guidance. This defines Contaminated Land in Scotland as:

"any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land that:

- significant harm is being caused or there is a significant possibility of such harm being caused; or
- significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused"

2.2 Definition of the water environment: WEWS 2003

Section 78A (9) of Part IIA defines pollution of the water environment in terms of the direct or indirect introduction into the water environment of substances which may give rise to harm. The term "water environment" is itself defined in WEWS as all surface water, groundwater, and wetlands (see Appendix 1 for further detail). Section 2 (2) of WEWS requires that responsible authorities (e.g. Local Authorities, SEPA) must ensure compliance with the requirements of the WFD and GWDD[5] when exercising their designated functions (e.g. regulating Contaminated Land).

2.3 Significant Pollution

Section 78A(2) provides that land is to be considered contaminated land for the purposes of Part IIA only in cases where any resulting water pollution is significant or where there is a significant possibility of significant pollution or harm occurring. The Statutory Guidance provides guidance to local authorities on the definition of significant pollution of the water environment. This section of the Statutory Guidance is reproduced in Appendix 2 along with information on SEPA's interpretation of this section of the Statutory Guidance.

In summary SEPA considers pollution to be significant where contamination is entering or is likely to enter the water environment at a level in excess of an assessment limit at an appropriate assessment point. The assessment point may be within a waterbody itself or at an abstraction point or other point designed to protect a receptor. Assessment limits are usually but not always based upon a suitable water quality standard. SEPA's approach to assessment of water pollution is provided in Section 3 of this document.

In SEPA's opinion where a water pollution assessment is being conducted for purposes other than assessment of contaminated land under Part IIA, such as through the planning regime or voluntary remediation, the assessment of pollution must incorporate consideration of the prevent and limit requirements of the GWDD, that is, whether hazardous substances are entering or likely to enter groundwater. The assessment of inputs of hazardous substances into groundwater is further described in SEPA Position Statement WAT-PS-10-01 http://www.sepa.org.uk/water/water_regulation/regimes/groundwater/discharges.aspx. Advice on the consideration of GWDD requirements within the context of Part IIA is provided in Section 4 of this document.

[5] Directive 2006/118/EC the Groundwater Daughter Directive

3.0 SEPA's approach to Assessment of Water Pollution

3.1 Staged approach

To provide consistent advice to Scottish Local Authorities when responding to site-specific consultation requests SEPA recommends a three stage systematic process to the consideration of whether any water environment receptor is being or could be significantly polluted.

Stage 1: Develop a Conceptual Site Model to identify possible sources, receptors, and pollutant linkages;

Stage 2: Determine Assessment Points and Assessment Limits appropriate to each receptor;

Stage 3 Establish if any linkage is resulting in, or could result in significant pollution of the water environment.

3.1.1 Stage 1: Identification of Possible Pollutant Linkages

Potential pollutant linkages should be identified and described in a Conceptual Site Model. The development of a Conceptual Site Model is discussed in detail in a number of other reference documents and British Standards (see References section of this document) and is not discussed further here.

It is important to note that for the purposes of Part IIA the source in any potential pollutant linkage must meet the two following criteria:

1. substances must be present in, on, or under land; and
2. substances must be entering, have the potential to continue to enter or be likely to enter the water environment.

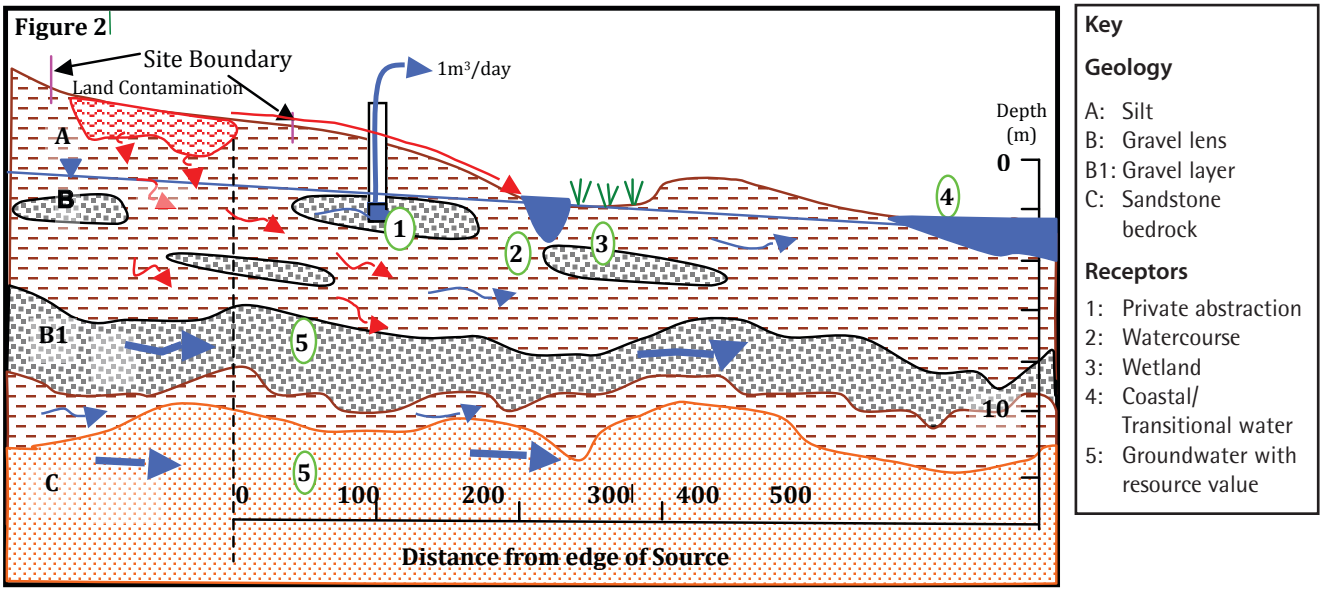

Figure 2. A diagrammatic summary of some key potential pollutant linkages.

Development of the technical case relies heavily on site data. The more confidence there is in the site conceptual model and the site data provided to back up the conceptual model, as formulated at Stage 1, the greater confidence there will be in reaching any decision regarding whether significant pollution of the water environment, or the significant possibility of such, is being caused.

3.1.2 Stage 2: Identify Assessment Point and Assessment Limit appropriate to each receptor

In order to determine whether the potential pollutant linkages identified in Stage 1 are significant pollutant linkages in terms of Part IIA it is necessary to identify an appropriate pollution assessment point for each receptor, and an appropriate assessment limit for each assessment point.

Pollution assessment points and the basis for their associated assessment limits are provided in Appendix 2 for each receptor type. These are summarised in Table 1 below. The approach to identifying pollution assessment points and assessment limits where groundwater is the receptor, or where groundwater is the pathway to other water environment receptors, is dealt with in detail in SEPA guidance document WAT PS-10-01: *"Assigning groundwater assessment criteria for pollutant inputs"* v2 which may be found on the SEPA website at: http://www.sepa.org.uk/water/water_regulation/regimes/groundwater/discharges.aspx

In most cases, the initial assessment should consider whether there is likely to be a breach of, or failure to meet, any assessment limit at an appropriate assessment point. In the absence of any suitable UK, EU or WHO standard on which to base the assessment limit, other human health risk based values, based on best scientific information can be used where demonstrated to be appropriate, in discussion with SEPA on a site specific basis.

Table 1 Summary of Assessment Points and Assessment Criteria

Receptor	Assessment Point	Water quality criteria for derivation of Assessment Limit
Groundwater resource	In groundwater 50 m from source (can be extended to 250 m) (see PS10-01)	Resource Protection Value (RPV)
Current abstractions (surface water and/or groundwater)	Raw water (before treatment)	Use based standard, e.g. Drinking Water Standard
Surface water	In water following dilution	Environmental Quality Standards (see WAT-SG-53) after dilution[6]
Groundwater Dependent Terrestrial Ecosytem (wetland) (groundwater pathway)	Site Specific	Site Specific[7]

3.1.3 Stage 3: Establishing if any linkage is resulting in, or could result in, significant pollution of the water environment (SPWE) or the significant possibility of significant pollution of the water environment (SPSPWE)

The possible pollutant linkages associated with the subject site, as formulated in Stage 1, are then subjected to a detailed assessment to establish the technical case on whether or not there is sufficient evidence to identify one or more significant pollutant linkages.

In most cases where potential pollutant linkages have been established and the assessment at Stage 2 shows that an Assessment Limit is, or is likely to be, exceeded at the relevant Assessment Point SEPA would advise that there is a significant pollutant linkage and significant pollution is occurring or is likely to occur.

This underlines the importance placed by SEPA on assessment utilising an appropriate assessment limit at the appropriate assessment point as described in detail in WAT PS-10-01, and available in other SEPA water

[6] Refer to S 7.1 of WAT-PS-10-01

[7] Refer to S 7.3 of WAT-PS-10-01

guidance for non-groundwater pathway linkages. SEPA acknowledges that certain sites may present occasional anomalies, and would reinforce to Local Authorities the importance of obtaining site specific advice in consideration of water pollution.

Where the assessment concludes that significant pollution is, or is likely to be, occurring this is sufficient to establish for the purposes of Part IIA that significant pollution of the water environment is occurring. Further consideration may then be given to whether the pollution is also impacting upon potable or industrial abstractions, the status of a water body or other legitimate uses of the water environment. Such factors will be important in establishing the seriousness of the pollution and the level of remediation required.

In some cases, assessors will become aware of actual impacts upon the water environment prior to undertaking such an assessment. For example, impacts on the status of a water body may have been identified through the River Basin Planning process. If it can be demonstrated that the land in question is, or is capable of, causing wholly or in part impacts upon status, this would represent evidence of significant pollution.

Table 2 below may be used as a checklist to confirm that the basic requirements of the Statutory Guidance have been taken into account.

Table 2 Checklist for Significant Pollution and Significant Possibility of Significant Pollution

Table 2 – A guide to significant pollution and the significant possibility of significant pollution of the water environment
Has an appropriate, scientific and technical assessment of all the relevant and available evidence been undertaken?
Has regard been given to any advice provided by SEPA?
On the balance of probabilities:
• are there substances in, on or under the land?
• do those substances retain the potential to cause pollution by continuing to enter or are they likely to enter at some time in the future (i.e. not a spent source)?
• are those substances in such a condition, or likely to be in such a condition that they are capable of entering the water environment by a pathway?, if so is there a pathway by which they could reach the environment?
• are those substances exceeding the assessment limit at the assessment point or are they more likely than not to do so now or at some time in the future?
• are any risk management arrangements to prevent SP of SPWE lacking, insufficient or unsuitable?
The answer to all the above questions must be YES for significant pollution of the water environment (or significant possibility of such) to be occurring. In addition:
Additional information that must be considered when looking at whether there is significant pollution of the water environment:
• are there combined effects between potential pollutants (either between the same substance on different areas of land or between different substances) that may result in significant pollution of the water environment?
• does a combination of several different pathways linking one or more potential pollutants to a particular part of the water environment result in significant pollution?

4. Remediation/Addressing Significant Pollution

Local authorities have a duty to cause to be remediated land identified under Part IIA as contaminated land, and SEPA has similar duties for special sites. PAN 33 should be referred to where remediation is being undertaken for development purposes.

In regulating a special site, SEPA follows the published Statutory Guidance on the remediation of contaminated land. The Statutory Guidance indicates that in evaluating the seriousness of any significant pollution of the water environment the enforcing authority should consider:

(a) whether the significant pollution of the water environment is already being caused;

(b) the likelihood of the significant pollution of the water environment being caused;

(c) the nature of the significant pollution of the water environment involved with respect, in particular, to:
   i the nature and importance of the water environment which might be affected,
   ii the extent of the effects of the actual or likely significant pollution on that water environment, and
   iii whether such effects would be irreversible; and

(d) the context in which the effects might occur, in particular:
   i whether the water environment has already been polluted by other means and, if so, whether further effects resulting from the pollution would materially affect its condition, and
   ii the relative risk associated with the pollution in the context of wider environmental risks.

Any remedial work should ultimately aim to ensure that significant pollution is no longer occurring or that it is not likely to occur, and should remedy the effects of any significant pollution that has already occurred. The standard of remediation that can be required under Part IIA of the Environmental Protection Act 1990 depends on what can be regarded as reasonable, having regard to the cost likely to be involved, the benefit that would result, the seriousness of the pollution and the best practicable remediation techniques.

Where it is not reasonable under Part IIA to require remediation for all or some significant pollutant linkages, or just part of a particular linkage, a remediation declaration will be issued by the enforcing authority. Enforcing authorities are required to place remediation declaration particulars on their public register.

In addition the GWDD requires that all measures be taken to prevent entry of hazardous substances into groundwater and limit entry of non-hazardous substances to prevent pollution. There are exemptions to this requirement, for example, where entry of hazardous substances cannot be prevented either because the measures would increase risks to human health or the environment or would be disproportionately costly. The way that SEPA has interpreted the exemptions is explained in Annex 1 of WAT PS-10-01. In many cases it is expected that the information recorded in a remediation declaration may contain the same or similar information to that which is required to be recorded for the purposes of the GWDD.

When considering the application of a GWDD exemption, or the 'reasonableness' of a remedial strategy, the enforcing authority must take into account any absolute requirements such as that for meeting the appropriate EQS for Priority Hazardous Substances.

To assist the local authority in taking an approach that is consistent with SEPA in relation to water pollution SEPA will respond to local authority consultation requests regarding remediation of water pollution where this process clearly involves water environment receptors.

5. References

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As amended by:
The Contaminated Land (Scotland) Regulations 2005. SSI 2005 No.658.
http://www.opsi.gov.uk/legislation/scotland/ssi2005/20050658.htm

The Scottish Executive. Environmental Protection Act 1990: Part IIA Contaminated Land Statutory Guidance: Edition 2. May 2006. Paper SE/2006/44. http://www.scotland.gov.uk/Publications/2006/06/05131212/0

The Scottish Executive Development Department, Planning Advice Note 33: development of Contaminated land.
http://www.scotland.gov.uk/Publications/2000/10/pan33

Scottish Environment Protection Agency (SEPA) Supporting Guidance (WAT-SG-02)
Modelling Continuous Discharges to Rivers. Version V1. Released: 01/11/2006
http://stir-ser-net01/cms/uploadedFiles/SG_02_Modelling_Discharges_to_rivers.doc

Scottish Environment Protection Agency (SEPA) Supporting Guidance (WAT-SG-11)
Modelling Coastal and Transitional Discharges. Version v 1.0. Released: 01/10/2006
http://stir-ser-net01/cms/uploadedFiles/SG_11_Modelling_coastal_discharges.doc

Scottish Environment Protection Agency (SEPA) Position Statement [WAT-PS_10-01] *"Assigning groundwater assessment criteria for pollutant inputs"*.
http://www.sepa.org.uk/water/water_regulation/regimes/groundwater/discharges.aspx

Scottish Environment Protection Agency (SEPA) Supporting Guidance (WAT-SG-53) Environmental Standards for Discharges to Surface Waters
http://www.sepa.org.uk/water/water_regulation/guidance/pollution_control.aspx

Further Information Sources

British Standards Institution. BS10175:2011 Investigation of Potentially Contaminated Sites – Code of Practice.

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Environment Agency. 2003. An illustrated handbook of DNAPL transport and fate in the subsurface. Environment Agency R&D Publication 133. Environment Agency, Bristol. http://publications.environment-agency.gov.uk/pdf/SCHO0604BHIT-e-e.pdf

Appendix 1

Section 1 (3) of WEWS defines the water environment as follows:

(2) "The water environment" means all surface water, groundwater and wetlands.

(3) "Surface water" means inland water (other than groundwater), transitional water and coastal water.

(4) "Groundwater" means water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

(5) "Wetland" means an area of ground the ecological, chemical and hydrological characteristics of which are attributable to frequent inundation or saturation by water and which is directly dependent, with regard to its water needs, on a body of groundwater or a body of surface water.

(6) "Inland water" means—

(a) all standing or flowing water on the surface of the land (other than transitional water), and
(b) all groundwater, within the landward limits of coastal water.

(7) "Transitional water" means water (other than groundwater) in the vicinity of river mouths which is partly saline in character as a result of its proximity to coastal water but which is substantially influenced by freshwater flows.

(8) "Coastal water" means water (other than groundwater) within the area extending landward from the 3 mile limit up to the limit of the highest tide or, where appropriate, the seaward limits of any bodies of transitional water, but does not include any water beyond the seaward limits of the territorial sea of the United Kingdom adjacent to Scotland.

(9) "The 3 mile limit" means the limit consisting of a line every point of which is at a distance of 3 miles on the seaward side from the nearest point of the baseline from which the breadth of the territorial sea of the United Kingdom adjacent to Scotland is measured; and "miles" means international nautical miles of 1,852 metres.

Appendix 2

Paragraph A.46 of the Statutory Guidance indicates that when determining whether pollution of the water environment is "significant", the local authority shall have regard to seven measures of significant pollution. Paragraph A.46 containing the seven measures is reproduced below.

A.46 In determining whether pollution of the water environment is "significant pollution of the water environment" for the purposes of section 78A(2)(b), the local authority shall have regard to the following:-

Measures of significant pollution:

- Whether there is a breach of, or failure to meet, any statutory quality standard for the water environment at an appropriate pollution assessment point. In the absence of any suitable UK or EU standard, other international standards can be used where demonstrated to be appropriate;
- Whether there is a breach of, or a failure to meet, any operational standard adopted by SEPA for the protection of the water environment
- Whether the pollution results in an increased level of treatment for an existing drinking water supply to ensure it is suitable for use and to comply with the requirements of Council Directive 98/83 /EC on the quality of water intended for human consumption. The potential for an increased level of treatment must also be considered for future use in drinking water protected areas as defined in sections 6 and 7 of the Water Environment and Water Services (Scotland) Act 2003;
- Whether the pollution results in an increased level of pre-treatment of water abstracted for industrial purposes
- Whether the pollution results in:-

  deterioration in the status of a water body or failure to meet good status objectives, as defined in the Water Framework Directive 2000/60/EC; and/or

  the failure of a Protected Area to meet its objectives, as defined in the Water Framework Directive 2000/60/EC
- Whether there is a significant and sustained upward trend in the concentration of pollutants in groundwater being affected by the land in question;
- Whether there is a material and adverse impact on the economic, social and/or amenity use associated with a particular water environment.

Paper SE/2006/44: Environmental Protection Act 1990: Part IIA Contaminated Land - Statutory Guidance: Edition 2. Annex 3, Chapter A, Part 4.

Interpretation of Statutory Guidance

SEPA considers pollution to be significant where contamination is entering or is likely to enter the water environment at a level sufficient to cause exceedence of an assessment limit at an appropriate assessment point. The assessment point is always associated with a receptor which may be a waterbody, an abstraction, or other water environment receptor.

SEPA considers that in assessment of any pollutant linkage, where an assessment limit is, or will be, exceeded at an assessment point, this is sufficient to make the formal determination of contaminated land and further individual assessment of other measures of significant pollution in the Statutory Guidance is not necessary.

If the assessment shows that an assessment limit is not, or will not be, exceeded at an assessment point, SEPA suggests it is not then possible that the pollution would be assessed as significant based on any of the other measures of significant pollution listed in the Statutory Guidance.

Further assessment against those measures may however provide information on the scale and seriousness of the pollutant linkage and the local authority may wish to consider these in the prioritisation of sites, and particularly when considering remedial options.

Appendix 3

Table 3a – Assessment points and assessment limits - current groundwater abstractions and groundwater resource		
RECEPTOR	Current groundwater abstraction	Groundwater as a future resource
Assessment point	Abstracted groundwater before treatment (i.e. raw water in the abstraction borehole)	50 m down gradient of the edge of the source. See also Section 7.3 of WAT-PS-10-01 for specified situations where this may be extended up to a maximum distance of 250 m.
Assessment limit	A concentration of the substance should be set such that there will be no increase in treatment required for the abstraction as a result of the land contamination. Consultation with the water user is required	Based upon the Resource Protection Value and the upgradient concentration of the substance. A range of RPVs for HAZARDOUS SUBSTANCES are provided in Annex 7 of WAT-PS-10-01 (See section 5.6 of WAT-PS-10-01) and for NON-HAZARDOUS SUBSTANCES in Annex 6 of WAT-PS-10-01
Substance not identified in Annexes to WAT PS 10-01	Not relevant – assessment limit is based on use and treatment	For hazardous substances use the MRV. Where no MRV is available use the LOD. For non-hazardous substances other human health risk based standards, based on best scientific information may be applied where demonstrated to be relevant.
For more information see: Section 7.3 of WAT-PS-10-01 http://www.sepa.org.uk/water/water_regulation/regimes/groundwater/discharges.aspx		

Table 3b – Assessment points and assessment limits - surface waters (river, loch, transitional and coastal waters)		
RECEPTOR	Surface waters (river, loch, transitional and coastal)	
Pathways:	Ecological and Human receptors	Abstractions
Assessment point	In the receiving water following dilution.	In raw water prior to treatment.
Assessment limit	**Ecological receptors:** Where the status of the surface water is less than good, a reduction in concentration of the substance will be required so that there is a return to good status. However, there should be consultation with River Basin Management Planners to assess the contribution of inputs from other sources prior to setting remedial targets for the land contamination. Where the water body is a high or good status then, following dilution, the concentration of the substance in the surface water must meet the relevant EQS for the water body, using the information provided in Scottish Government Directions[8], allowing for upstream contributions (See section 5.6 of WAT-PS-10-01). **Human Health Receptors** Where it can be demonstrated that the surface water represents a social or amenity asset then appropriate protection may be applied. The approach that should be taken is described in WAT-PS 06-06: Human Health Protection and the Water Environment.	The concentration of the substance should be set such that there will be no increase in treatment required for the abstraction as a result of the land contamination. Consultation with the water user is required.
Substance not listed?	**Ecological receptors:** If no EQS, derive a Predicted No Effect Concentration (PNEC) or use a surrogate.	
For more information see:	For entry via the groundwater pathway see Section 7.2 of WAT-PS-10-01 Further information can be found in SEPA Supporting Guidance (WAT-series) on modelling discharges. • WAT-SG-11: Modelling Coastal and Transitional Discharges. Version v 1.0. • WAT-SG-02: Modelling Continuous Discharges to Rivers • WAT- RM-37 –Regulation of Phosphorous Discharges to Freshwater Lochs	

[8] The Scotland River Basin District (Surface water Typology, Environmental Standards, Condition Limits and Groundwater Threshold Values) Directions 2009

Table 3c – Assessment points and assessment limits appropriate to Groundwater Dependant Terrestrial Ecosystems (GWDTE) (Wetlands)		
RECEPTOR	Groundwater Dependant Terrestrial Ecosystems (GWDTE) (Wetlands)	
Pathways:	**Entry via the groundwater pathway**	**Direct entry (e.g. via overland flow or through conduits)**
Assessment point	The way in which damage to GWDTEs will be assessed is in the process of development. No assessment points have yet been defined. Please seek site specific advice from SEPA.	
Assessment limit	A methodology for determining appropriate assessment limits has yet to be developed due to the lack of agreed water quality standards. Please seek site specific advice from SEPA.	
For more information see:	For entry via the groundwater pathway see Section 7.4 of WAT-PS-10-01 GWDTE-specific guidance not yet available.	

Note: If assessment against the above criteria indicates that significant pollution is not occurring or is not likely to occur then SEPA consider it is not likely the pollution could be affecting the status of the groundwater body or Protected Area.