

Extract from HMG IA Standard No. 1 Business Impact Level Tables

Issue No: 3.5 October 2009

The copyright of this document is reserved and vested in the Crown.

Extract from HMG IA Standard No.1 Business Impact Level Tables

properties according to the business sector in which they operate.

Intended Readership

This extract is aimed at those within HMG Departments who are responsible for defining the Business Impact Level for information and ICT systems. This could include information risk owners, accreditors and IA practitioners who are required to conduct risk assessments.

Executive Summary

Departments should assess the Business Impact Level (BIL) for information and ICT systems in accordance with the guidance provided by the tables within this extract.

Departments should assess the BIL for confidentiality, integrity and availability of information assets as independent Departments should note that for confidentiality there is а correlation between protective marking and BIL. This correlation is a typical mapping and Departments should ensure that BIL assessments for have taken account of any aggregation or other issues that may affect the BIL assessment. It is important to note that no equivalent correlation of protective marking to BIL exists for integrity and availability.

Any interpretations of the terminology used within the tables should be justified in the RMADS and accepted by the accreditor.

Aims and Purpose

This document provides a ready-reference standalone version of the table published in Information Assurance Standard No 1 part 1 Issue 3.5 dated October 2009. It also replaces the stand-alone version of The Business Impact Table Issue 2.2 dated March 2009.

The tables within this document provide a framework to allow organisations to assess the BIL for compromises of the confidentiality integrity or availability of information and ICT systems. The business impact level scale ranges from 0 (no impact) to 6 (extreme impact). The business impact of a loss of confidentiality, integrity and availability should be assessed as independent properties for any given asset or set of assets.

The tables that are provided describe business impact statements for various sectors of the UK. The aim is to provide a common set of standards that lead to a consistent approach to the assessment of business impact. Tables have been written from the



perspective of UK society. This means that it should be possible to compare impact from across different sectors more readily.

Issue 1.0 – Stand-alone version of table in Appendix 3 of HMG Infosec Standard No.1 dated March 2007	July 2007
Issue 2.0 - Updated	March 2008
Issue 2.1 – At launch of SPF.Infosec changed to Information Assurance	October 2008
Issue 2.2 – Minor amendments to Table 3 & 4	March 2009
Issue 3.5 – Amended to reflect changes in HMG Information Assurance Standard 1 Issue 3.5 dated October 2009. All issue numbers now in line to avoid confusion.	October 2009

Extract from HMG IA Standard No.1 Business Impact Level Tables

Key Principles

Using the tables

It is unlikely that all definitions associated to a particular Impact Level in any given table will apply. Some will be relevant, others not. It is also probable that definitions from more than one business area, sub-category and impact level may apply. In these cases, judgement is required to select the most appropriate in the environment in question.

Selecting the Correct Table

Business areas and sub-categories are defined within the table and should be selected on the basis of those, which most closely relate to the asset under consideration. For example, if you are a local authority your business area is primarily providing a public service and there are a number of sub-categories applicable. For example the loss of availability of a system supporting a key transport mechanism, may impact sub-categories of Transport (direct loss of transport impact) and Finance (the economic effect on business of a lack of transport). Where more that one category is relevant then the worst-case business impact should be selected.

Impacts to Confidentiality and Protective Markings

Where a UK Protective Marking is applied to an asset there is a direct

correlation between this and business impact level. The Protective Markings PROTECT, RESTRICTED. CONFIDENTIAL, SECRET and TOP SECRET directly match to business impact levels 2, 3, 4, 5 and 6 respectively. This is a one-way relationship. It is not the case that an asset with a business impact level of 5 for confidentiality necessarily should be marked SECRET. This is especially true of impacts to aggregated data. GPG 9 provides further guidance on managing aggregation. There is no equivalent set of protective markings for Integrity or Availability.

Terminology

Many impact level definitions are provided with a descriptive adjective, for example 'minor' or 'major'. In this context they are simply portraying a level of importance to the impact in a particular business environment. There are a number of relative terms used within the table, and their use is not defined, precisely rather appropriate to the business function in question. For example, 'medium term' in one case may mean 2 to 5 days, but in another case may mean up to 3 years. Interpretations may be used as long as they can be justified in the **RMADS** and accepted the Accreditor.



Sub Category	BIL 0	BIL 1	BIL 2	BIL 3	BIL 4	BIL 5	BIL 6
Impact on life and safety	None	None	Inconvenience or discomfort to an individual	Risk to an individual's personal safety or liberty	Risk to a group of individual's security or liberty	Threaten life directly leading to limited loss of life	Lead directly to widespread loss of life
Impact on political stability	None	None	None	Minor loss of confidence in Government	Major loss of confidence in Government	Threaten directly the internal political stability of the UK or friendly countries	Collapse of internal political stability of the UK or friendly countries
Impact on military operations	None	Minimal delay to or loss of minor supply service	Loss of a number of minor supply services	Make it more difficult to maintain the operational effectiveness or security of UK or allied forces (e.g. compromise of UK forces training materials or supply procedures)	Cause damage to the operational effectiveness or security of UK or allied forces (e.g. compromise of a logistics system causing re-supply problems without causing risk to life)	Cause severe damage to the operational effectiveness or security of UK or allied forces (e.g. compromise of the operational plans of units of company size or below in a theatre of military operations)	Cause exceptionally grave damage to the operational effectiveness or security of UK or allied forces (e.g. compromise of the operational plans of units of battalion size or above in a theatre of military operations)
Impact on foreign relations	None	None	None	Cause embarrassment to Diplomatic relations	Materially damage diplomatic relations (e.g. cause formal protest or other sanctions).	Raise international tension, or seriously damage relations with friendly governments	Directly provoke international conflict, or cause exceptionally grave damage to relations with friendly governments
Impact on international trade negotiations	None	None	None	Disadvantage a major UK Company	Disadvantage a number of major UK Companies	Disadvantage the UK in international negotiations (e.g. advance compromise of UK negotiation strategy or acceptable outcomes, in the context of a bilateral trade dispute)	Severely disadvantage the UK in international negotiations (e.g. advance compromise of UK negotiation strategy or acceptable outcomes, in the context of a major EU or WTO negotiating round)
Impact on intelligence operations	None	None	None	Damage unique intelligence operations in support of intelligence requirements at JIC Priority Three or less.	Halt unique intelligence operations in support of intelligence requirements at JIC Priority Three or less, or damage unique intelligence operations in support of requirements at Priority Two	Halt unique intelligence operations in support of intelligence requirements at JIC Priority Two, or damage unique intelligence operations in support of intelligence requirements at JIC Priority One. Cause damage to UK or allied intelligence capability	Halt unique intelligence operations in support of intelligence requirements at JIC Priority One. Cause severe damage to UK or allied intelligence capability

Table 1 – Defence, International Relation, Security and Intelligence

Extract from HMG IA Standard No.1 Business Impact Level Tables

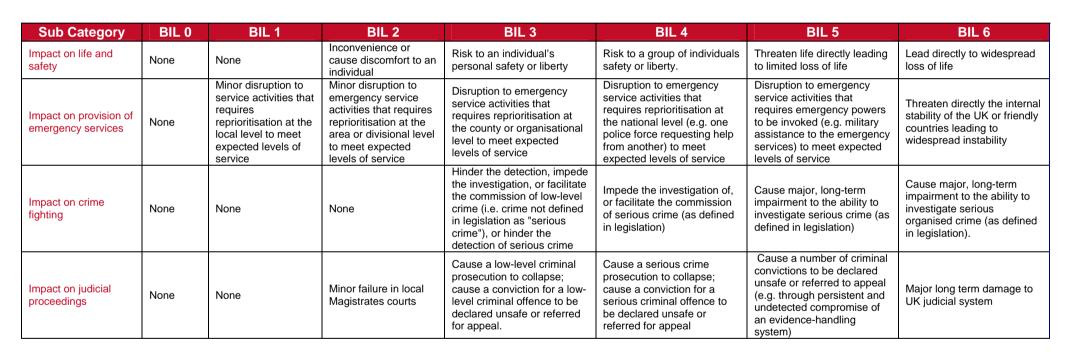


Table 2 - Public Order, Public Safety and Law Enforcement



Sub Category	BIL 0	BIL 1	BIL 2	BIL 3	BIL 4	BIL 5	BIL 6
Impact on public finances	None	Loss to Public Sector of up to £10,000	Loss to Public Sector of up to £1 million	Loss to HMG/Public Sector of £millions	Loss to HMG/ Public Sector of £10s millions, up to £100 million	Short term material damage to national finances or economic interests (to an estimated total of £100s millions to £10 billion)	Major, long term damage to the UK economy (to an estimated total in excess of £10 billion)
Impact on UK trade and commerce	None	None	Undermine the financial viability of a number of UK small businesses	Undermine the financial viability of a minor UK-based or UK-owned organisation	Undermine the financial viability of a major UK-based or UK-owned organisation	Material damage to international trade or commerce, directly and noticeably reducing economic growth in the UK	Major, long term damage to global trade or commerce, leading to prolonged recession or hyperinflation in the UK

Table 3 – Trade, Economics and Public Finance

Standard No.1 Business Impact Level Tables



Sub Category	BIL 0	BIL 1	BIL 2	BIL 3	BIL 4	BIL 5	BIL 6
Inconvenience and impact on public confidence in public services	None	Likely to reduce an individual citizen's perception of that service (e.g. a compromise leading to the cancellation of a hospital appointment)	Likely to reduce the perception of that service by many citizens (e.g. compromise leading to an outpatient clinic closing for a day, with cancellation of appointments)	Likely to result in undermined confidence in the service provider generally (e.g. public failures at a hospital leading to noticeable lower public confidence in that hospital)	Likely to result in undermined confidence in the service at a national level (e.g. compromise of national patient information databases leading to undermined confidence in the NHS)	May lead to a loss of public trust in the service severe enough to cause a noticeable drop in citizens using the service through mistrust, with consequent risk to life	May lead to a complete breakdown in public trust, black market services thrive, consequent widespread loss of life or critical impact on continuity of government
Impact on public finances	None	Likely to cause a loss to the Public sector of up to £10,000	Likely to cause a loss to the Public sector of up to £1 million	Likely to cause a loss to HMG/ Public sector of £millions	Likely to cause a loss to HMG/ Public sector of £10s millions, up to £100 million	May cause short term material damage to national finances or economic interests (to an estimated total of £100s millions to £10 billion)	May cause major, long term material damage to the UK economy (to an estimated total in excess of £10 billion)
Impact on non-public finances	None	Minor financial loss to an individual or business (typically up to £100)	Significant financial loss to an individual or business	Severe financial loss to any individual such as unemployment or loss of a small UK business	Devastating financial loss for an individual, or severe economic loss leading to loss of a large company or employer or a number of small businesses	Material financial loss to the UK economy, leading to loss of a number of large organisation or severe damage to entire market sectors	Extensive financial losses across the economy leading to significant long-term damage to the UK, such as wide spread unemployment and recession
Locally provisioned services with an impact on the personal safety of citizens (e.g. sheltered accommodation)	None	None	Low risk to an individuals personal safety (e.g. the compromise of the address of a victim of abuse, where there is a low risk of further abuse if such information became known)	Directly lead to a risk to an individuals personal safety (e.g. the compromise of the address of a victim of abuse, where there is a reasonable risk of further abuse if such information became known)	Serious risk to any individual's personal safety (e.g. the compromise of the address of a victim of abuse, where serious further abuse is likely if such information became known)	Threaten life directly (e.g. the compromise of witness protection information, where there is a real risk of attempted murder if the information became known)	Directly threaten or lead to wide spread loss of life (particularly social care and environmental health services)



Sub Category	BIL 0	BIL 1	BIL 2	BIL 3	BIL 4	BIL 5	BIL 6
Locally provisioned services with an impact on the health of citizens (e.g. waste disposal)	None	Disruption to a local service	Disruption, compromise or flawed working of local services which could pose a risk to health (e.g. spread of disease)	Authority-wide disruption, compromise or flawed working of services which could pose an increased risk to health (e.g. spread of disease)	Significant authority-wide disruption, compromise or flawed working of services which could lead to major health risks	Major disruption or compromise of a Local Authorities services, or critical faults within these services, which could lead to severe health risks and limited loss of life	Catastrophic disruption or compromise of a number of Local Authority services, or catastrophic faults within these services, which could lead to severe health risks and widespread loss of life
Locally provisioned services with no impact on health or safety of citizens (e.g. library services, land use and planning services)	None	Cancellation of services to a small number (up to 10) of citizens (e.g. closure of a library or other facility)	Cancellation of services to a number (up to 100) of citizens (e.g. closure of a library or other facility)	Cancellation of multiple services to a number (up to 1000) of citizens leading to significant individual financial losses	Loss of major services provided by a Local Authorities leading to major financial losses to the Local Authority or Citizens	Total loss of major services provided by a Local Authorities leading to severe financial losses to the Local Authority or devastating losses to Citizens.	Total loss of major services provided by a number of Local Authorities leading to severe financial losses to the Local Authorities and Citizens, leading to major economic damage.
Locally provisioned services in support of the Civil Contingencies Act	None	Isolated or minor incident to which a Local Authority is not able to react within a few days which affects a small number of citizens	Isolated or minor incident to which a Local Authority is not able to react within a few days which affects a number of citizens/local businesses	Significant incident to which a Local Authority is not able to react within 24 hours which affects a large number of citizens/local businesses - e.g. significant flooding, fire, contamination or explosion.	Major incident to which a Local Authority is not able to react within 24 hours which affects a large number of citizens/local businesses - e.g. major flooding, fire, contamination, explosion or CNI failure.	Major incident to which a Local Authority is not able to react within 12 hours which affects a large number of citizens/local businesses - e.g. major flooding, fire, contamination, explosion or CNI failure	Major incident to which several Local Authorities are not able to react within 12 hours which affects a large number of citizens/local businesses - e.g. major flooding, fire, contamination, explosion or CNI failure.

Table 4 - Public Services

Extract from HMG IA Standard No.1 Business Impact Level Tables

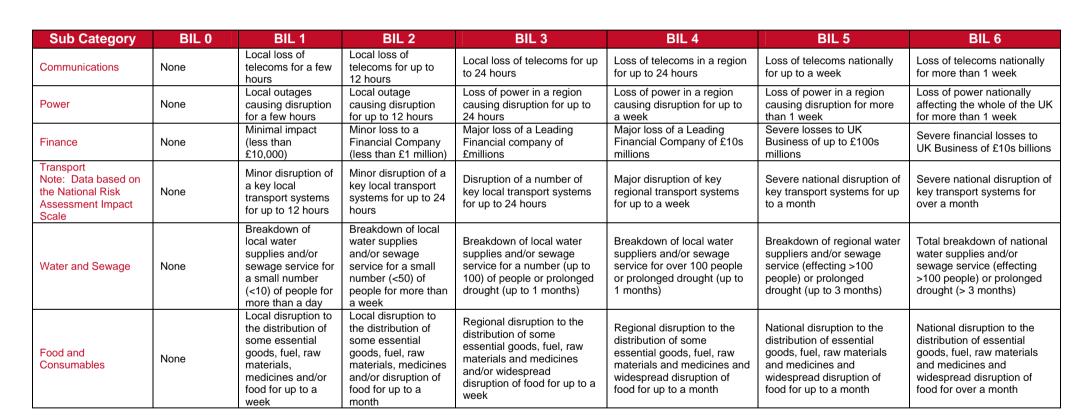


Table 5 – Critical National Infrastructure (CNI)



Sub Category	BIL 0	BIL 1	BIL 2	BIL 3	BIL 4	BIL 5	BIL 6
Impact on health and safety of the Citizen	None	Minor injury or illness with a quick (within one week) and complete recovery to an individual	Compromise an individual's personal safety or security.	Minor injuries to a group of individuals or serious injury to an individual involving slight to moderate pain for 2-7 days. Thereafter some pain/discomfort for several weeks. Some restrictions to work and/or leisure activities over several weeks/months. After 3-4 months return to normal health with no permanent disability.	Serious injury to several individuals or compromise of a group of individuals personal safety	Permanent incapacitating injury or illness to an individual, Moderate to severe pain for 1-4 weeks. Thereafter some pain gradually reducing, but may recur when taking part in some activities. Some permanent restrictions to leisure and possibly some work activities and may directly threaten their life.	Permanently incapacitating injury or illness to many individuals that may lead to widespread loss of life.
Impact on the Privacy of the Citizen	None	Loss of control of a citizen's personal data beyond those authorised by the citizen.	Loss of control of many citizens' personal data beyond those authorised by each citizen.	Loss of control of a citizen's sensitive data beyond those authorised by the citizen. A compromise to the identity or financial status of an individual citizen.	Loss of control of many citizens' sensitive or financially significant personal data beyond those authorised by each citizen. A compromise to the identity or financial status of many citizens. Increased vulnerability to criminal attack.	Widespread compromise of identity management systems or personal financial systems across the UK.	The collapse of identity management systems or personal financial systems across the UK.
Impact on the Identity of the Citizen.	None	Illicit access using one individual's identity on behalf of another would cause inconvenience to the victim.	Illicit access using one individual's identity on behalf of another would allow the entry of incorrect information, thereby causing distress, or access to payments intended for that person or could further a subsequent impersonation attack on that individual.	Illicit access using several individual's identities would allow the entry of incorrect information, thereby causing distress, or access to payments intended for those people or could further subsequent impersonation attacks on several individuals.	Illicit access using many (thousands of) individual's identities would allow the entry of incorrect information, thereby causing distress, or access to payments intended for those people or could further subsequent impersonation attacks on many individuals.	Illicit access would facilitate a serious crime, such as blackmail or long-term fraud or disrupt an on-going legal process or provide the means of creating an illicit real world identity for an individual or several individuals.	Illicit access could lead to the loss of liberty or life of an individual or several individuals.

Extract from HMG IA Standard No.1 Business Impact Level Tables

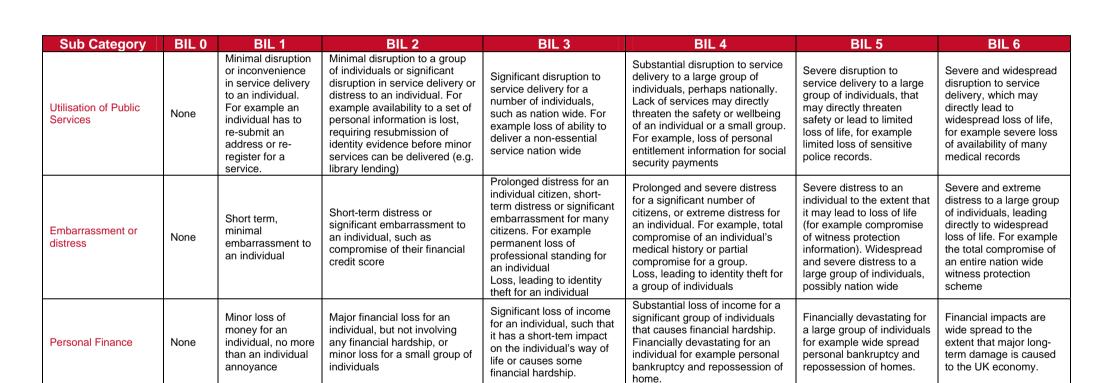
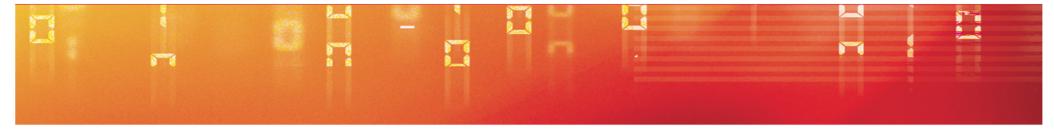


Table 6 - Personal / Citizen



THIS PAGE IS INTENTIONALLY LEFT BLANK

Extract from HMG IA Standard No.1 Business Impact Level Tables

Customer Feedback

CESG Information Assurance Guidance and Standards welcomes feedback and encourage readers to inform CESG of their experiences, good or bad in this document. We would especially like to know about any inconsistencies and ambiguities. Please use this page to send your comments to:

Customer Support
CESG
A2j
Hubble Road
Cheltenham GL51 0EX
(for the attention of IA Policy Development Team)

Fax: (01242) 709193 (for UNCLASSIFIED FAXES ONLY)

Email: enquiries@cesg.gsi.gov.uk

For additional hard copies of this document and general queries please contact CESG enquiries at the address above

PLEASE PRINT

Your Name:

Department/Company Name and Address:

Phone number: Email address:

Comments:



HMG IA Standards are issued jointly by Cabinet Office and CESG, the UK National Technical Authority for Information Assurance, in support of Mandatory Requirements specified in the HMG Security Policy Framework (SPF). The standards outline minimum measures that must be implemented by Departments and Agencies bound by the SPF, and compliance with SPF Mandatory Requirements cannot be claimed unless adherence to the Standards can be demonstrated. They do not provide tailored technical or legal advice on specific ICT systems or IA issues. Cabinet Office and GCHQ/CESG and its advisers accept no liability whatsoever for any expense, liability, loss, claim or proceedings arising from reliance placed upon this Standard.

IA CESG B2h Hubble Road Cheltenham Gloucestershire GL51 0EX

Tel: +44 (0)1242 709141 Fax: +44 (0)1242 709193

Email: enquiries@cesg.gsi.gov.uk

© Crown Copyright 2009. Communications on CESG telecommunications systems may be monitored or recorded to secure the effective operation of the system and for other lawful purposes. This information is exempt from disclosure under the Freedom of Information Act 2000 and may be subject to exemption under other U.K. Information legislation. Refer disclosure requests to the originating Agency.