

Y Pwyllgor Deisebau

Lleoliad:
Ystafell Bwyllgora 1 – y Senedd

Dyddiad:
Dydd Mawrth, 4 Mehefin 2013

Amser:
09:00

Cynulliad
Cenedlaethol
Cymru

National
Assembly for
Wales



I gael rhagor o wybodaeth, cysylltwch a:

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Agenda

1 Cyflwyniad, ymddiheuriadau a dirprwyon

Trafodaeth am sesiynau tystiolaeth 14 Mai 2013

2 **P-04-472 Gwnewch y Nodyn Cyngor Technegol Mwynau yn ddeddf 9.00 – 9.05** (Tudalen 1)

3 **P-04-442 Sicrhau cymorth da i blant anabl a'u teuluoedd sy'n agos i'w cartrefi 9.05 – 9.10** (Tudalen 2)

4 **Deisebau newydd 9.10 – 9.20**

4.1 P-04-484 Lwfans Cynhaliaeth Addysg i bawb! (Tudalen 3)

4.2 P-04-485 Camddefnyddio contractau dros dro yn y sector Addysg Bellach (Tudalen 4)

4.3 P-04-486 Gweithredu nawr er mwyn achub siopau y Stryd Fawr (Tudalen 5)

5 **Y wybodaeth ddiweddaraf am ddeisebau blaenorol 9.20 – 9.45**

5.1 P-04-470 Yn erbyn gwladoli Maes Awyr Caerdydd (Tudalennau 6 – 7)

Tai ac Adfywio

5.2 P-04-419 Moratoriwm ar Ddatblygu Ffermydd Gwynt (Tudalennau 8 – 18)

5.3 P-04-422 Ffracio (Tudalennau 19 – 21)

5.4 P-04-469 Dileu'r Cap Rhanbarthol ar Brisiau mewn Perthynas â'r Cynllun Hawl i Brynu (Tudalennau 22 – 24)

Cyfoeth Naturiol a Bwyd

5.5 P-04-385 Deiseb ar ryddhau balw̄ns a lanternau (Tudalennau 25 – 106)

5.6 P-04-398 Ymgyrch dros gael cofrestr ar gyfer pobl sy'n cam-drin anifeiliaid yng Nghymru (Tudalen 107)

5.7 P-04-439 Diogelu coed hynafol a choed treftadaeth Cymru ymhellach (Tudalennau 108 – 110)

5.8 P-04-444 Ymgyrch 'DIG FOR VICTORY' (Tudalennau 111 – 114)

Diwylliant a Chwaraeon

5.9 P-04-403 Achub Plas Cwrt yn Dre/ Hen Senedd-Dy Dolgellau (Tudalennau 115 – 116)

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5.10 P-03-301 Cydraddoldeb i'r gymuned drawsryweddol (Tudalen 117)

5.11 P-04-362 Gwasanaethau Ambiwllans ym Mynwy (Tudalennau 118 – 209)

5.12 P-04-451 Achub Gwasanaethau Ysbyty Brenhinol Morgannwg (Tudalennau 210 – 211)

5.13 P-04-456 Dementia – Gallai hyn ddigwydd i chi (Tudalennau 212 – 217)

Addysg

5.14 P-04-458 Cadwch Addysg Bellach yn y Sector Cyhoeddus (Tudalennau 218 – 220)

Yr Economi, Gwyddoniaeth a Thrafnidiaeth

5.15 P-03-240 Diogelwch ar ffordd yr A40 yn Llanddewi Felffre (Tudalennau 221 – 223)

5.16 P-04-373 Parthau Gwaharddedig o Amgylch Ysgolion ar gyfer Faniau Symudol sy'n Gwerthu Bwyd Poeth (Tudalennau 224 – 225)

6 P-04-457 Yr Ymgyrch Caplaniaeth Elusennol: Sesiwn Dystiolaeth 9.45 – 10.15 (Tudalennau 226 – 232)

Alan Rogers, Deisebydd

Brian Pearce

**7 P-04-474 Cefnogaeth i wasanaethau caplaniaeth y GIG : Sesiwn
Dystiolaeth 10.15 – 10.45** (Tudalennau 233 – 236)

Jim Stewart, Deisebydd

Wynne Roberts, Caplan Gofal Bugeiliol a Chadeirydd Rhwydwaith Rhyng-ffydd
Gogledd Orllewin Cymru

Eitem 2

P-04-472 Gwnewch y Nodyn Cyngor Technegol Mwynau yn ddeddf

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i wneud y Nodiadau Canllaw Nodyn Cyngor Technegol Mwynau, yn arbennig y rheini'n ymwneud â chlustogfa 500 metr o amgylch gweithfeydd brig, yn orfodol yn neddfau cynllunio Cymru.

Gwybodaeth ychwanegol: Ar 20 Ionawr 2009, cyflwynodd Jane Davidson, y Gweinidog Amgylchedd, nodiadau canllaw Cyngor Technegol Mwynau Glo (MTAN) a oedd newydd eu cyhoeddi, ar gyfer Cymru, a nododd: “.. bydd y Nodyn Cyngor Technegol Mwynau Glo yn cyflawni'r addunedau (yn 2008) i gyflwyno Aseidiadau Effaith ar lechyd ar gyfer ceisiadau glo, ynghyd â chlustogfeydd, a gyda phwyslais ar weithio'n agos â chymunedau lleol. Mae'n ailddatgan yr ymrwymiad (yn 2008) i glustogfa 500m.” Yn 2009 nid oedd gan Lywodraeth Cymru'r pŵer i wneud ei chanllawiau cynllunio yn ddeddf. Mae ganddi'r pŵer bellach

Prif ddeisebydd: Dr John Cox

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 16 Ebrill 2013

Nifer y llofnodion: 680. Casglwyd deiseb gysylltiedig 330 o lofnodion

P-04-442 : Sicrhau cymorth da i blant anabl a'u teuluoedd sy'n agos i'w cartrefi

Geiriad y ddeiseb:

Rydym ni, y rhai sydd wedi llofnodi isod, yn galw ar Lywodraeth Cymru i sicrhau cymorth da i blant anabl a'u teuluoedd sy'n agos i'w cartrefi.

Er mwyn cyflawni hyn, rydym ni'n galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i sicrhau bod Bil Addysgol (Cymru) yn cynnwys egwyddor 'darparu'n lleol' yn y Bil a fydd yn:

- sicrhau gwasanaethau cynhwysol a hygyrch yn yr ardal leol, ac
- yn rhoi dyletswydd ar asiantaethau lleol i gyflwyno gwasanaethau cynhwysol a hygyrch os nad ydynt yn bodoli, drwy waith cynllunio gwell, partneriaeth a thrwy gynnwys rhieni lleol yn y gwaith.

Prif ddeisebydd: Scope Cymru

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 4 Rhagfyr 2012

Nifer y llofnodion: 2,606

Eitem 4.1

P-04-484 Lwfans Cynhaliaeth Addysg i bawb!

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i ganiatáu pob plentyn 16–19 oed mewn addysg llawn amser i gael y £30 llawn o'r Lwfans Cynhaliaeth Addysg yr wythnos, beth bynnag yw incwm eu rhieni.

Gwybodaeth ychwanegol: Dylai pob plentyn 16–19 oed gael y £30 llawn o'r Lwfans Cynhaliaeth Addysg yr wythnos, beth bynnag yw incwm eu rhieni. Nid yw pob rhiant sy'n ennill cyflog digonol yn helpu eu plant yn ariannol i fynd i'r coleg, ac mae'n anodd dod o hyd i waith oherwydd bod y rhan fwyaf o weithleoedd yn gofyn am brofiad yn eu meysydd. Dylai pob plentyn gael y lwfans wythnosol, ar yr amod eu bod yn mynd i'r ysgol neu'r coleg.

Prif ddeisebydd: Jack Gillum

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 4 Mehefin 2013

Nifer y llofnodion : 10

P-04-485 Camddefnyddio contractau dros dro yn y sector Addysg Bellach bach

Geiriad y ddeiseb:

Galwn ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i ddefnyddio i dylanwad i sicrhau nad yw'r sector Addysg Bellach yn camddefnyddio contractau i dalu staff fesul awr (contractau dim oriau) a chontractau cyfnod penodol ac mai dim ond pan fydd cyfiawnhad gwrthrychol gwirioneddol dros ddefnyddio contract tymor byr hyblyg y gwneir hynny.

Prif ddeisebydd: Briony Knibbs

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 4 Mehefin 2013

Nifer y llofnodion : 674

Eitem 4.3

P-04-486 Gweithredu nawr er mwyn achub siopau y Stryd Fawr

Geiriad y ddeiseb:

Rydym yn galw ar y Cynulliad Cenedlaethol i annog Llywodraeth Cymru i ddarparu cefnogaeth ar gyfer masnachwyr annibynnol yn ein trefi drwy ymestyn y Cynllun Rhyddhad Ardrethi i Fusnesau bach i nifer fwy o fusnesau.

Hoffwn ni weld cynllun sy'n debyg i'r un sy'n gweithredu yn yr Alban lle mae eiddo masnachol sydd â gwerth ardrethol o hyd at £18,000 yn cael rhyddhad rhwng 25% a 100% ar raddfa symudol.

Rydym yn credu bod penderfyniad Llywodraeth Cymru i ohirio ail werthuso busnesau o 2015 i 2017 ddim yn caniatáu i effeithiau y dirwasgiad economaidd i gael ei adlewyrchu yn y dreth fusnes.

Prif ddeisebydd: Keith Davies

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 4 Mehefin 2013

Nifer y llofnodion : 12

P-04-470 Yn erbyn gwladoli Maes Awyr Caerdydd

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i gyfiawnhau'n llawn ei phenderfyniad i wladoli Maes Awyr Caerdydd, a darparu tystiolaeth y bydd ei brynu yn dod â gwerth am arian a budd i drethdalwyr Cymru ble bynnag maent yn byw yng Nghymru.

Prif ddeisebydd: Madeleine Thornton

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 16 Ebrill 2013

Nifer y llofnodion: 196



Eich cyf/Your ref: P-04-470
Ein cyf/Our ref: FM/00493/13

William Powell AM
Chair
Petitions Committee
committeebusiness@Wales.gsi.gov.uk

16 May 2013

Dear William,

I am writing in response to your letter dated 24 April following the submission of a petition, to the Petitions Committee, about Cardiff Airport by Madeline Thornton.

The Welsh Government undertook an independent due diligence report to ensure all aspects surrounding the purchase of Cardiff Airport were fully considered. On completion of this report the Welsh Government, via a holding company, acquired the share holding of the airport.

We have published three underpinning documents from the advice we received on our website, which can be accessed through the following link:
<http://wales.gov.uk/topics/transport/public/air/cardairport/?lang=en>

Cardiff Airport is a vital gateway to Wales for business, tourists and general travellers alike. As such, the securing of the airports future will benefit Wales as a whole.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Carwyn Jones', written in a cursive style.

CARWYN JONES

P-04-419 : Moratoriwm ar Ddatblygu Ffermydd Gwynt

Geiriad y ddeiseb

Galwn ar Gynulliad Cenedlaethol Cymru i ofyn i Lywodraeth Cymru am foratoriwm ar ddatblygu ffermydd gwynt a thyrbinau gwynt y mae ganddi gyfrifoldeb datganoledig drostynt. Bydd y moratoriwm yn gyfnod o fyfyrto, a bydd pwyllgor trawsbleidiol yn cael ei gynnull yn yr amser hwn i archwilio effeithiau gweithredu tyrbinau gwynt ar iechyd, lles cymdeithasol, gwerth adeiladau, twristiaeth, a'r economi leol, o fewn 15 kilometr i'r safleoedd hyn.

Gofynnwn i'r pwyllgor trawsbleidiol gael caniatâd i gomisiynu gwaith ymchwil annibynnol ar faterion datganoledig iechyd, lles cymdeithasol a thwristiaeth mewn perthynas â thyrbinau gwynt, ac i gytuno ar gyfres o safonau ar gyfer ynni gwynt datganoledig, a fydd yn blaenoriaethu gofalu am yr amgylchedd lleol, tir amwynderau, cynefinoedd a natur.

Gofynnwn hefyd i bob safle tyrbinau gwynt ddatganoledig orfod cael cymeradwyaeth mewn refferendwm lleol (o fewn 5 kilometr).

Nid yw'r ddeiseb hon yn ymwneud ag ynni gwynt a reolir gan Gyfarwyddiaeth y Seilwaith Cenedlaethol.

Prif ddeisebydd: James Shepherd Foster

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 2 Hydref 2012

Nifer y llofnodion: 1332

Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration



Llywodraeth Cymru
Welsh Government

Ein cyf/Our ref CS/00885/13

William Powell AM
Chair Petition's Committee

committeebusiness@Wales.gsi.gov.uk

15th May 2013

Dear William

Thank you for your letter of 24 April with regard to a petition calling for a moratorium on wind farm applications.

A number of the petition's recommendations are directed towards Natural Resources Wales; this response is on behalf of the Welsh Government and not Natural Resources Wales. You may wish to contact Natural Resources Wales directly to obtain their views. However, it should be noted that, a number of the recommendations directed towards Natural Resources Wales, such as to undertake a review of Technical Advice Notes (TANs), would not be appropriate as they relate to issues which are not within their remit.

The Petitioner's response raises a number of issues which I will address in turn.

Health and Safety in Construction and Design of Wind Turbines

Incidents involving turbines are rare. The risks posed by wind turbines can and should be managed by their operators so that neither the workers involved in building or running them, nor members of the public, are harmed or put at risk of harm.

Separation distances, between turbines and other land uses (such as buildings, roads and railways), are considered within the planning and consenting process in order to ensure safety. The distance between wind turbines and buildings required, on the basis of expected noise levels and visual impact, will often be greater than that necessary to meet safety requirements.

Where appropriate, the Health and Safety Executive or the relevant local planning authority, depending on the particular circumstances, would be responsible for investigating incidents involving wind turbines.

Placement of Turbines in Rural Landscapes

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1NA

English Enquiry Line 0845 010 3300
Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence: Carl.Sargeant@wales.gsi.gov.uk

Wedi'i argraffu ar bapur wedi'i ailgylchwrdd **Tudalen 9**

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Landscape and visual impacts are considered within the planning and consenting process. Wind turbines should be sited and designed so that adverse effects on landscape and visual amenity are minimised and the special qualities of designated areas are protected. Wind farm applications will usually require an Environmental Impact Assessment (EIA). EIA is a means of drawing together an assessment of a project's likely significant environmental effects, including its impact on the landscape.

TAN 8: Planning for Renewable Energy seeks to minimise the affect across Wales of large scale renewable energy developments by identifying 7 Strategic Search Areas (SSAs). The SSAs are considered most suitable in terms of environment, technical issues and grid network. This approach seeks to safeguard our most important environmental priorities and minimise the associated grid lines required to meet our obligations under European and UK law.

Ecology and Biodiversity

Ecology and biodiversity impacts of wind farms are considered as part of the planning and consenting process. Planning Policy Wales (edition 5, November 2012) supported by TAN 5: Nature Conservation and Planning provides advice on protecting and enhancing biodiversity and geological conservation. Policy guidance is given for local planning authorities in considering any development proposal on how to consider environmental impact, so as to avoid, wherever possible, adverse effects on the environment. In addition, TAN 8 addresses the potential impact of wind turbines moving blades upon birds and bats. This issue is a common concern but, in most cases, will not lead to significant numbers of bird and bat deaths or injuries.

Wind farm applications will usually require an EIA; which assesses the effect of developments on the environment. In addition, developers should follow the industry's Best Practice Guidelines and work closely with organisations, such as Natural Resources Wales and the RSPB, to ensure that wind farm design and layout does not interfere with sensitive species or wildlife designated sites.

In 2011 the Welsh Government published "Practice Guidance: Planning Implications of Renewable and Low Carbon Energy" as a tool to support Local Planning Authorities in dealing with applications for renewable and low carbon energy development, including wind farms. This provides advice on what mitigation measures can be incorporated into the design of wind turbines and wind farms to mitigate potential impacts on local ecology.

Noise

Noise impacts are considered within the planning and consenting process. The guidelines for the assessment of wind turbine noise, as identified in TAN 8, are set out in The Assessment and Rating of Noise from Wind Farms - ETSU-R-97. These guidelines were accepted as the recommended method for the assessment of wind turbines by the UK Government in 2004.

We have been assisting the Institute of Acoustics and the Department of Energy and Climate Change on the production of good practice guidance to the application of ETSU-R-97 for wind turbine noise assessment. This good practice guide is anticipated to be published shortly.

Well designed wind farms should be located so that increases in ambient noise levels, around noise-sensitive developments, are kept to acceptable levels with relation to existing background noise. This can be achieved through good design of the turbines and by allowing sufficient distance between the turbines and any noise-sensitive development.

Flooding

National Planning Policy, and EIA Regulations, identify that any proposal for a wind farm development needs to consider potential impacts upon both hydrology and hydrogeology, and, where necessary, provide appropriate mitigation.

The Welsh Government's "Practice Guidance: Planning Implications of Renewable and Low Carbon Energy" provides advice on what mitigation measures can be incorporated into the design to minimise flood risk and surface water runoff.

Changes to planning policy are based upon clear and substantiated evidence, and my officials keep a watching overview for the need to revise planning policy. In terms of the preferred advice set out by Galar it is not clear what evidence underpins their figures.

National Planning Policy, in relation to protection of groundwater and flood risk, is robust and it is not proposed to endorse the recommendations put forward by Galar.

Review of Planning Guidance

TAN 8 provides an appropriate framework for the strategic planning of all forms of renewable energy in Wales. The Welsh Government has no intention, at the present time, to undertake a wholesale review of TAN 8.

In addition, it is for local planning authorities to set out local criteria, against which smaller scale renewable energy proposals outside of Strategic Search Areas will be evaluated, in their development plans. We have prepared a Toolkit 'Planning for Renewable and Low Carbon Energy – A Toolkit for Planners' to assist local planning authorities produce renewable energy assessments in support of their local development plans. The Toolkit offers a possible methodology which enables local authorities to develop a robust evidence base to assess the potential renewable and low carbon energy generation. The information can underpin renewable energy and low carbon energy policies in local planning authority's local development plan.

Community Benefit

We are currently working with the onshore wind industry to increase levels of Welsh investment and we will set expectations for economic and community benefit. We have agreed the broad principles under which onshore wind community benefits should be operated within Wales and an analysis of current community support arrangements is taking place. The Welsh Government and wind developers are currently participating in workshops to develop more detailed arrangements.

Tourism

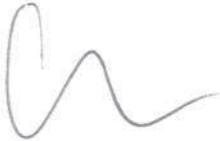
A diverse range of factors influence the tourism industry. There is no concrete evidence to suggest that wind farms damage tourism. Although inconclusive, previous research carried out into the impact of wind farms on tourism in Wales has indicated that, for the majority of visitors, the existence of wind farms in the countryside does not have a major impact. Studies carried out elsewhere indicate that the impact of wind farms on tourism is minimal and, if they are properly designed and sensitively laid out, there is no reason to believe that renewable energy targets and tourism are incompatible.

The Welsh Government is in the process of commissioning research, on the economic impact of wind farms and associated grid infrastructure on the tourism industry, as part of

our forward research program. We anticipate that this work will be completed by early summer.

Moratorium on Wind Farm Applications

I do not support the recommendations put forward by Galar on the basis that national planning policy sets out an appropriate planning framework for renewable energy development in Wales and the effects of wind energy development are addressed as part of the planning and consenting process. We remain fully committed to our renewable energy policies in Energy Wales: A Low Carbon Transition, Planning Policy Wales and TAN 8. I will not support the introduction of a moratorium on wind farm applications.

A handwritten signature in blue ink, appearing to read 'C. Sargeant', with a stylized, cursive script.

Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration

Galar ecology volunteer group

For the attention of William Powell AM. Chair of the petitions Committee

21/05/2013

Dear William,

The Clerk to the Petitions Committee forwarded a copy of the letter of the 15th May 2013 from Carl Sargeant AC /AM, Minister for Housing and Regeneration. I thank you for that and the opportunity to respond.

I agree entirely with the Minister that many of the petitions requests are aimed at Natural Resources Wales and should the Petitions Committee recommend that NRW forms a committee to address issues relating to this petition, then, provided the committee's evidence gathering was inclusive of public consultation, and their conclusions and report were open to public scrutiny; I would personally feel that the petitioners had achieved a good and democratic outcome to their petition.

I was perturbed to see that NRW cannot review Technical Advice Notes which impact on the environment. I attended a meeting in Cardiff, at the inception of NRW and the Minister (John Griffiths) said that the reason for the merger of FCW, CCW, and EAW was to produce the very best environmental recommendations to the Welsh Assembly Government. However, if they are without the power of review, it does go part way to explaining why many of the TAN's are stuck in a time warp, and out of touch with technological advance.

With regards to the Ministers other comments my response is:-

Health and Safety

I could not agree less with the Ministers conclusions. Incidents involving turbines are not rare, in the past twelve months around 48 instances in the UK have occurred ranging from complete turbines blowing over, to blade buckling, and this is on a onshore turbine population of about 10% of the industries ambitions.

The Minister suggests risks could and should be managed by their operators. Self regulation is no regulation. Every man woman and child in this country are in austerity brought about by little or no regulation on the banking sector, who put profit before prudence. Banking was by and large UK based, but gave scant regard to allegiance with the rest of the population. The Wind Industry is by and large foreign or off shore owned, and their principle allegiance is to Boards of Directors and share holders outside the UK. In the early days of wind energy the manufacture of the turbines lay with EU countries operating to EU standards, this is no longer the case. Many parts of a turbine are made up of materials which contain PCB's and carcinogenic materials which are industrial contaminants being deployed in rural areas. **The contamination risk is to our agriculture, the very backbone of the country, is very real**

from both fire and destruction. Disposal at the end of a turbines working life is less a threat to rural areas, but amounts to many tonnes of material, wherever WAG intends its disposal. We want reasonably safe conditions, which would improve the acceptability of these machines; and also save WAG the embarrassment of another lack of competence issue, like the Ash Die Back scandal, which would be seen to have taken risks with our rural lands yet again.

I would agree with the Minister that the Health and Safety Executive and local Planning Authorities are ideally placed for investigating incidents, however we must accept that this is a reactive measure, and does not in itself solve any problems. I would direct the Petitions Committee to their own efforts to solve the noise problems in Gwyddgrug, and the Ministers subsequent refusal to adopt any of your recommendations.

I have examined the installation standards as set out by one developer, and these standards would be quite acceptable to most engineers, however there are many reports about standards being ignored. Until the acceptable standards are common to all wind turbines, and verified by the Building Standards departments of Local Planning Authorities, at the time of installation, then there will always be post installation disputes.

Placement of Turbines in Rural Landscapes

I would agree with the Minister comments within limits. However, the concern of the petitioners, with regard to this subject, are not entirely addressed. Many turbines are now being erected outside the strategic search areas, so the protection of both a full EIA and TAN 8 is not available in these circumstances. Coincidentally, by far the most incidents of turbine damage and failure, referred to above, were on single turbine installations. All single turbines are the responsibility of the Local Authority Planners. We attended several Planning Committee meetings where single turbines were discussed, and would take issue with all of them as not providing the committee members with enough information to make a reasonably sound judgement.

With regard to the Strategic Search Areas, while they have the benefit of a EIA it is not independent of the developer, who has a self serving interest, with regard to the development.

Also, while Arrup are undoubtedly one of Wales's leading engineering companies, their reports and advice are secondary to the developers demands. As an example of this I would cite the application in SSA G called by the developer Brechfa Forest East. There are twelve proposed turbines on this site, every one of the twelve breach Arrup's TAN 8 Final report to Carmarthen County Council by at least two conditions, some by as many as five. **If the Minister is going to quote TAN 8 as protection to the residents, environment and biodiversity of the SSA's, then the least we can expect is that a developer must abide by it.**

Ecology and Biodiversity

In our original evidence to the Petitions Committee we gave Barn Owls and Bats as examples of the need to exercise a duty of care in SSA's. The documents the Minister cites as evidence do not relate specifically to SSA's, only generally.

With Bats we know from the latest evidence available, that some species are prone to migratory patterns. Some bats migrate 60km or more. All we are asking here is that within the SSA's and a 5Km border around them, that any migratory patterns are established, and judgement on turbine placement takes these findings into account. Areas outside the SSA's should have a bat specialist create a report as part of planning procedure, and provided they examine the possibility of migration as applied to individual sites, that would satisfy requirements.

The Barn Owl Trust portrays Wales has been suitable habitat for Barn Owls, with the exception of a corridor around Motorways. In these corridors the trust suggests discouraging breeding by not making nesting boxes available. Because wind farms locally create far greater danger, both in area of disturbed air, and speed of the mechanisms, than a motorway, we ask that this discouragement be made public as advice within SSA's, and habitat outside the SSA's is created. With other avian species culling of breeding pairs, and habitat/ feeding stations outside the SSA's could be encouraged.

Noise

The Petitions Committee have already, very fairly, addressed the noise problem in the last petition GALAR was involved in. Hayes McKenzie produced what I considered was an excellent report, and while we all await to see the 'Good Practise' guide, I feel it will not add to the knowledge we have in Wales. From this petitions viewpoint we ask that the means of predicting Topography variation of noise is addressed. This means that better methods of measuring wind shear, and topographical cross winds be employed on site evaluation, prior to building. DEFRA still advise turbine spacing by prevailing wind assessment, even though it can be shown that 'prevailing' in upland Wales is one of many wind directions, and certainly not like the more predictable direction of a coastal or plateau site.

I would just add that the Institute of Acoustics and DECC are not examining noise because they have time on their hands, but it is as a result of pressure from parties outside the wind industry and WAG.

Flooding

The Minister asks what figures underpin GALAR's evidence with regard to flooding, they are in fact the figures produced by the Meteorological Office, an example of which we offer below. These show that since reliable recording began in 1910 four out of the five heaviest average rainfalls for the UK have occurred since 2000. Further, when the Met Office announced the 2012 results it predicted that further 'heavy' rain years were inevitable in the near future, due to Global Warming producing the conditions for the formations of heavy rain clouds.

While I realise that predictive statistics are not an exact science evidence from such august bodies as the IPCC say that extreme weather patterns will increase due to Global Warming and many independent Meteorological Experts predict the UK will have at least another abnormal rain year, within the next four years and the 2000 record will fall within the next eight years.

Professor David MacKay (Chief Scientific Advisor to DECC) says in his book ‘Sustainable Energy Without Hot Air’ that up to four times more rainfall occurs on Mountains and higher ground. Which is true of Wales; there is nowhere in Wales which will flood by virtue of the rain falling directly on it. All floods are caused by water flowing from higher ground faster than the flooded area can dispose of the water.

Professor Dieter Helm (Currently advising DEFRA, but has held previous appointments advising Tony Blair, DECC, the EU etc.) wrote in his book ‘The Carbon Crunch’ that despite all our efforts the atmospheric CO2 is increasing, and while the EU’s direct contribution may be falling a little, it is more than offset by Carbon Imports.

GALAR asks that a minimum amount of water is retained on the high ground where we are proposing to build Wind Farms. That the best time to do it is when the heavy duty machinery is available on the installation of the Wind Turbines to create the Dams Dykes and Ditches needed to retain the water. This will alleviate flood risk at lower strata.

Further GALAR ask that the water retained be used to combine with dry goods to create the thousands of tonnes of cement required by to construct the Wind Farm offsetting the carbon debt of Wind Farm construction in carting water in Ready Mix cement in six cubic meter loads.

Further GALAR asks that some water be retained in pools suitable for use by the Fire Services in tackling forest fires, accidentally or maliciously started. These fires occur annually, and we maintain that the presence of Wind Turbines will alter the dynamic of their occurrence, and the risk to our Fire Officers. (This matter was raised, as a single issue for GALAR by our AM Rhodri Glynn Thomas and Mr. Bowen Head of Planning Carmarthenshire, after several months the Forestry Commission as was, failed to deliver any sort of satisfactory reply).

This mitigation helps answer the predictions of our Meteorological Office and the advice of Professors MacKay and Helm, and is far more practical and robust than the National Planning Policy.

Five Wettest Years

Since 1910

1. 2000 - 1,337.3mm
2. 2012 - 1,330.7mm
3. 1954 - 1,309.1mm
4. 2008 - 1,295.0mm
5. 2002 - 1,283.7mm

(Source: Met Office)

(Please note these are UK averages, areas in both Wales and Scotland showed higher individual scores in 2012 .)

Review of Planning Guidance

At no point in the petition, or our evidence do we ask for a wholesale review of TAN8. In fact as written above, we ask that aspects of TAN 8, currently ignored by developers, are fully implemented.

We do ask that all planning matters relating to Wind Farms accept the need to adapt to new circumstance. Knowledge of wind shear and AM, non European supply of products, new IPCC and Meteorological forecasts, all precede TAN 8. Political targets have increased, along with turbine size, all impacting on planning accommodation. It is both unrealistic and unsustainable to try and put today's quart into yesterday's pint pot.

While I would agree that local councils should be at the heart of developments below 50MW, in practise I do not see why guidelines affecting LDP's should emanate from Cardiff Bay. Surely devolution was meant to travel all the way down the M4? 50MW is a tiny amount of energy which, with wind technology, has a massive impact on local communities, it should be in the gift of local councillors to democratically decide on how their communities fulfil their renewable energy requirements.

I would suggest the Minister's insistence that the aspects of TAN 8, of which he approves, should be set in stone, and the Centralised Government control implications of WAG 'advice' are a symptomatic of the political and cultural divisions that bedevil Wales.

Community Benefit

The present level of community benefit is around £5,000 per installed MW a miniscule amount. The Minister says he is working with the onshore wind industry to increase levels of Welsh investment which will set new levels of community benefit.

We would save the Minister the embarrassment of going cap in hand, to beg from an industry which constantly underperforms, is led and supported by the lobby system, and will be shuttling subsidised profit out of the country.

The petition asked for a reform of community benefit with money been sourced from the landlords and DECC. We want a cross party committee, which will take evidence and devise a method, using the new tax raising powers, to cash in on the windfall profits.

We would also like the name **Community Benefit** changed to **Environmental Compensation**. This will reflect what the money is for, and remove the taint of the rich benefactor throwing a handful of coins to the street urchins.

In respect of the Developers contribution, increasing it will only fall as a burden on all consumers. It is now firmly world opinion to have firms like Amazon and Starbucks paying a fair amount of tax into the country where the profits are being generated. This is true of wind developers in Wales. We would ask the new cross party committee to devise Environmental Compensation which is a reflection of profit and not a charge set against income.

This is why we called for an all party committee to examine ways that will significantly increase what should rightly be called Environmental Compensation. The days of Parish handouts ended in the depression of the 1930's. In order to regenerate the communities and pay full compensation to people in affected properties an annual charge of £24,000 per

installed MW, and a weighted rate of £28,000 in Swansea and the valleys is needed. This would be an ideal opportunity to use devolved tax raising powers.

Tourism

GALAR does not do tourism, I have passed the paragraphs on this to our local tourism guru's with the warning on confidentiality, until the Ministers letter is in the public domain.

Wind Farm Moratorium

We are only asking for a Moratorium until a new deal is available to the SSA's and individual applications. Many of the subjects could be retrospective, and others like 2002/49/EC (European Noise Directive) are in the WAG's hands. It would be perfectly acceptable to concentrate the reforms within the SSA's. It is hardly surprising the Minister rejects our petition, as power would be devolved from Cardiff Bay.

Yours Sincerely

James Shepherd Foster

Eitem 5.3

P-04-422 : Ffracio

Geiriad y ddeiseb

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Gweinidog yr Amgylchedd a Datblygu Cynaliadwy i lunio Datganiad Polisi Cynllunio Mwynau Interim Gweinidogol, yn ogystal â nodyn cyngor technegol newydd, i gryfhau'r egwyddor ragofalus ynglŷn â cheisiadau cynllunio ar gyfer olew a nwy ar y tir, gan gynnwys ffracio. Rhaid dileu pob amheuaeth wyddonol resymol bod risg o effeithiau niweidiol, a rhaid rhoi'r ystyriaeth gryfaf i'r angen brys i liniaru'r newid yn yr hinsawdd.

Prif ddeisebydd: Cyfeillion y Ddaear Cymru

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 2 Hydref 2012

Nifer y llofnodion: Tua 1000

Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-422
Ein cyf/Our ref CS/00748/13

William Powell AM
AM for Mid & West Wales
Chair
Petition's committee

Ty Hywel
Cardiff Bay
Cardiff
CF99 1NA

7th May 2013

Dear William,

Our current planning policy contained in Planning Policy Wales, Minerals Planning Policy Wales, and the supporting Technical (and Mineral) Advice Notes sets out a precautionary approach, and identifies that in embracing a presumption in favour of sustainable development proposals must ensure that any potential impacts on the environment, economy, and society can be appropriately mitigated, including taking into account climate change, and greenhouse gas emissions.

Minerals Planning Policy Wales identifies that in relation to energy minerals local (mineral) planning authorities must provide as much guidance in their development plans as possible to indicate where it is likely to be environmentally acceptable for mineral resources to be worked. To achieve this degree of certainty, policies should state where such operations would not be acceptable and should provide unequivocal statements as to why, and should also provide a set of clear criteria against which any future proposals will be assessed in those areas where there is a possibility of extraction. The criteria are set out in Minerals Planning Policy Wales.

Policies should distinguish clearly between the three stages of exploration, appraisal and development. It will be necessary for an operator to obtain planning permission for each of these stages of development. Mineral planning authorities should establish with the Department of Energy and Climate Change (DECC) the areas which are licensed, and identify any environmental and other constraints on production and processing in those areas.

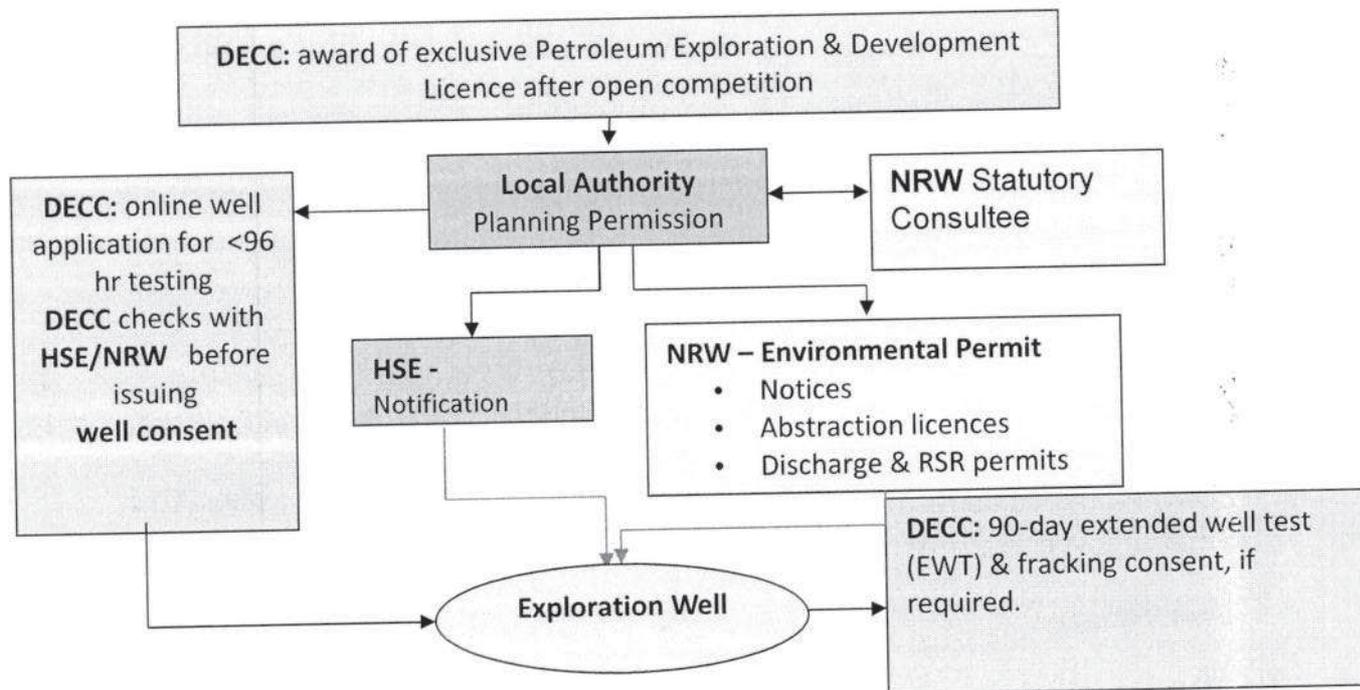
In addition to needing a relevant licence from DECC it is also necessary for an operator to obtain an Environmental Permit from Natural Resources Wales before any development can

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Caerdydd • Cardiff
CF99 1NA

English Enquiry Line 0845 010 3300
Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence.Carl.Sargeant@wales.gsi.gov.uk
Printed on 100% recycled paper

Wedi'i argraffu ar bapur wedi'i ailgylchu (100%)

take place. The diagram overleaf identifies all the required consents that an operator would need before shale gas extraction could take place.



Minerals Planning Policy Wales also identifies that in respect of groundwater and surface water issues mineral planning authorities must consult the Environment Agency [now Natural Resources Wales] and, where doubt exists, should adopt the precautionary principle in taking planning decisions on mineral development.

My officials are continuing to engage with the UK Government and the respective agencies to ensure robust and consistent evidence is developed, and are also keeping under review the need to produce new planning guidance as this evidence comes forward.

However I believe the current precautionary policy position in Wales, together with the controls provided through other regulatory bodies, provide sufficient safeguards for the environment and society.

Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration

P-04-469 Dileu'r Cap Rhanbarthol ar Brisiau mewn Perthynas â'r Cynllun Hawl i Brynu

Geiriad y ddeiseb:

Dileu'r cap rhanbarthol ar brisiau mewn perthynas â'r cynllun Hawl i Brynu yng Nghymru.

Unwaith eto, mae Cymru yn ôl yn yr oesoedd tywyll o ran polisiau. Mae Llywodraeth y DU wedi amlinellu cynllun i ganiatáu gostyngiad o hyd at uchafswm o £75,000 yn Lloegr, ond mae'r uchafswm yng Nghymru yn parhau i fod yn swm pitw o £16,000. Bydd yr anghyfartaledd mewn cyfoeth yn parhau i dyfu, ac ni fydd tenantiaid cyngor byth yn gwireddu'r uchelgais o brynu eu cartrefi eu hunain.

Prif ddeisebydd: James Jackson

Ysytyriwyd am y tro cyntaf gan y Pwyllgor: 16 Ebrill 2013

Nifer y llofnodion: 171

Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-469
Ein cyf/Our ref CS/00883/13

William Powell AM
Chair
Petitions Committee

William.powell@wales.gov.uk

15th May 2013

Dear William

PETITION NUMBER P-04-469 - REMOVAL OF THE REGIONAL PRICE CAP OF THE RIGHT-TO-BUY SCHEME IN WALES

Thank you for your letter of 24 April concerning a 171 signature petition submitted by Mr James Jackson. The petition requests an increase to the Right to Buy maximum discount cash limit in Wales, which has stood at £16,000 since 2003.

The main provisions of the Right to Buy scheme are contained in primary legislation first enacted by the UK Government in 1980. Much of this primary legislation, now contained in the Housing Act 1985, is still applicable to Wales.

The Secretary of State for Wales did, however, have delegated power for secondary legislation in a number of areas, including the Right to Buy maximum discount cash limit. In 1998, the UK Government decided to reduce the maximum discount cash limit from £50,000. They introduced regional limits throughout England, ranging from £24,000 to £38,000. In Wales, the Secretary of State reduced the limit to £24,000 in early 1999.

When the National Assembly for Wales was established later in 1999, it assumed devolved responsibility for secondary legislation in a number of areas, including housing.

In 2003, the UK Government decided to further reduce the discount cash limit to £16,000 in parts of south east England, due to concerns about a shortage of affordable housing available for rent. In Wales, following consultation, Ministers also decided to reduce the discount level further. However, they decided against reductions on a regional basis and opted to set a new limit of £16,000 throughout Wales.

In April 2012, the UK Government increased the discount limit in England to £75,000. It is their intention that homes sold as a result of the higher discount levels will be replaced by

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Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence: Carl.Sargeant@wales.gsi.gov.uk

new homes for 'affordable rent' funded, in part, by the additional Right to Buy receipts. There is a specific definition of affordable rent in England.

The Welsh Ministers decided not implement similar changes in Wales. That is because, under the provisions of the Government of Wales Act 2006, the Welsh Government now has full legislative powers in a number of areas, including housing.

Using these powers, it is open to the Welsh Ministers to propose changes to any aspect of the Right to Buy scheme, including those enshrined in primary legislation.

Two years ago, the National Assembly for Wales passed the Housing (Wales) Measure 2011. The Measure allows local authorities to apply to the Welsh Ministers for a direction to suspend the Right to Buy in areas of housing pressure for a period of up to five years.

The Welsh Ministers were concerned that, for many years, there had been no formal provisions to replace social housing stock sold under the Right to Buy scheme. The Housing (Wales) Measure 2011 sought to address this.

Demand for housing in Wales exceeds supply. So, while the Welsh Government recognises the aspiration of many social housing tenants to own their home, we must also have regard to the requirements of people who do not have a home which meets their needs.

We do not intend, therefore, to replicate the UK Government's approach in terms of increasing Right to Buy discounts. Different approaches by different legislatures are, of course, an inevitable result of devolution. We consider that our approach is best suited to the needs of the people of Wales.



Carl Sargeant AC / AM
Y Gweinidog Tai ac Adfywio
Minister for Housing and Regeneration

Eitem 5.5

P-04-385 Deiseb ynghylch rhyddhau balwnau a llusernau

Geiriad ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i ddeddfu yn erbyn rhyddhau balwnau a llusernau Tsieineaidd (neu lusernau awyr) i'r awyr yn fwriadol.

Cyflwynwyd y ddeiseb gan: Bryony Bromley

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 1 Mai 2012

Nifer y llofnodion: 564

Gwybodaeth ategol: Derbyniodd Eco-bwyllgor Rhanbarthol Caerdydd (sy'n cynnwys cynrychiolwyr o eco-ysgolion baner werdd Caerdydd) gynnig yn ddiweddar i weithio tuag at gael deddfwriaeth i atal rhyddhau nifer fawr o falwnau a llusernau Tsieineaidd/llusernau awyr yn fwriadol ar yr un pryd gan eu bod yn cael effaith niweidiol ar fywyd gwylt, ar y tir ac yn y môr.

Rhyddhau balwnau

Cafwyd sawl achos o anifeiliaid gwylt yn cael eu darganfod gyda balwnau latecs yn eu stumogau, a oedd yn rhwystro eu llwybr treulïad. Gall rhywogaethau morol, yn enwedig crwbanod morol a rhai adar môr, feddwl mai sglefren fôr, sy'n ysglyfaeth iddynt, yw'r balwnau ar wyneb y dŵr a'u llyncu neu efallai y byddant yn mynd yn sownd ac yn boddi. Unwaith y bydd balwn wedi'i lyncu, gall rwystro'r llwybr treulïo a gallai hynny arwain at farwolaeth drwy lrgu. Mae'r Gymdeithas Cadwraeth Forol wedi cynnal awtopsiâu ar nifer sylweddol o anifeiliaid gwylt yn y môr sydd wedi cael eu canfod wedi'u golchi ar draethau, gan gadarnhau effaith balwnau ar y llwybr treulïo.

Mae Undeb Cenedlaethol yr Amaethwyr wedi hysbysebu'r risg y gall anifeiliaid sy'n pori dagu ar falwnau ac y gall falwnau halogi gwair, sydd eto'n peri risg o dagu

(<http://www.telegraph.co.uk/earth/agriculture/farming/8494881/Farmer-wins-compensation-after-Red-Nose-Day-balloon-kills-cow.html>)

Mae ymgyrchoedd marchnata diweddar wedi awgrymu ei bod yn bosibl rhyddhau balwnau 'ecogyfeillgar' gan ddefnyddio balwnau bioddiraddadwy sy'n gallu pydru ar yr un raddfa â deilen Dderw.

- Mae lefel uchel o daninau mewn dail Derw a gall gymryd dwy flynedd iddynt bydru'n llwyr os na chânt lefelau uchel o olau haul neu ddŵr.

Yn dilyn gwaith ymchwil a wnaed yn 2008, mae Cadw Cymru'n Daclus wedi datgan y dylid ystyried bod rhyddhau balwnau'n fwriadol yn fath o daflu sbwriel. Ers iddo ddechrau cofnodi sbwriel ar ffurf balwnau fel rhan o'i arolwg LEAMS (System Archwilio a Rheoli Amgylcheddol Lleol) yn 2008–09, mae Cadw Cymru'n Daclus wedi gweld sbwriel ar ffurf balwnau ym mhob un o 22 o awdurdodau lleol Cymru. Yn un sir, gwelwyd sbwriel ar ffurf balwnau ar 17% o'r strydoedd.

Mae'r Gymdeithas Cadwraeth Forol wedi cynnal ymgyrchoedd i atal rhyddhau balwnau ers 1996, ac mae o leiaf 23 o awdurdodau yn y DU ar hyn o bryd yn gweithredu gwaharddiad ar ryddhau nifer fawr o falwnau ar yr un pryd. Mae'r data'n dangos bod cyfanswm y sbwriel ar ffurf balwnau a geir ar draethau Cymru wedi treblu dros y 15 mlynedd nesaf yn anffodus, wrth i'r arfer ddod yn fwy poblogaidd.

Mae tua 10% o'r balwnau a gaiff eu rhyddhau i'r awyr yn disgyn i'r ddaear mewn un darn. Mae'r ffigur hwn yn uwch pan fydd rhubanau a thagiau plastig wedi'u clymu wrthynt.

<http://www.mcsuk.org/downloads/pollution/dont%20let%20go.pdf>

Llusernau Tsieineaidd / Llusernau Awyr

Mae Asiantaeth y Môr a Gwylwyr y Glannau wedi cyhoeddi rhybudd ynghylch peryglon llusernau Tsieineaidd, ar sail y ffaith eu bod yn cael eu camgymryd am fflaglau a ddefnyddir os bydd pobl mewn perygl.

Mae'r RSPCA wedi rhybuddio y gallai'r weiren sy'n llunio strwythur y llusernau achosi "anesmwythder anhygoel" i wartheg os caiff ei llyncu.

Mae Undeb Cenedlaethol yr Amaethwyr wedi galw am wahardd llusernau Tsieineaidd, oherwydd y perygl y gallent ei beri i anifeiliaid sy'n pori.

<http://www.bbc.co.uk/news/magazine-11265560>

Oherwydd y perygl o dân, rhybuddiodd Cymdeithas y Prif Swyddogion Tân bobl i beidio â rhyddhau llusernau, gan ddweud, er eu bod yn edrych yn wych, ni ellir eu rheoli unwaith y maent yn yr awyr.

<http://www.bbc.co.uk/news/uk-england-13934378>

Mae Cymdeithas Hedfan Iwerddon wedi amlygu'r risg y mae llusernau'n ei beri i awyrennau ac y mae'n mynnu yn awr y dylid gofyn am ei chaniatâd cyn i lusernau gael eu rhyddhau yng Ngweriniaeth Iwerddon. Mae hefyd yn

mynnu y dylid hysbysu'r Uned Rheoli Traffig Awyr agosaf, Gwylwyr y Glannau Iwerddon a'r Orsaf Garda leol.

(Cyhoeddiad gan Gymdeithas Hedfan Iwerddon 'Sky Lanterns and the risk to Aviation'.)

John Griffiths AC /AM
Gweinidog yr Amgylchedd a Datblygu Cynaliadwy
Minister for Environment and Sustainable Development



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-385
Ein cyf/Our ref JG/00389/13

William Powell AM
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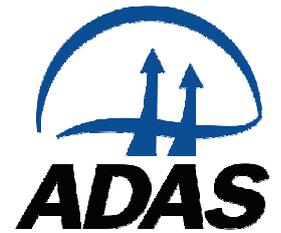
Amryl TS14

16 April 2013

Thank for your letter of 27 February regarding the independent research project on the impact of sky lanterns and helium balloons on livestock, plants and the environment. I can confirm that the research report will be shared with the Committee following publication, which is now expected to take place at the end of April.

*Tws eidd
Alun*

Alun Davies
Minister for Natural Resources and Food
Gweinidog Cyfoeth Naturiol a Bwyd



Sky lanterns and helium balloons: an assessment of impacts on livestock and the environment



Prepared as a joint report for:
Department for Environment, Food and Rural Affairs
Livestock Policy Division
Ergon House
London
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Welsh Government
Department for Environment and Sustainable Development
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May 2013



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Steven Tompkins, project lead on evidence from stakeholders

Rebecca Carter, project lead on desk-review of literature

Yiyang Cao, market evaluation of sky lantern and helium balloon supply industry

Specialist colleagues have also provided expert support in gathering and evaluating evidence on impacts on animal health and welfare and marine ecology.

Acknowledgements

The authors would like to thank all those who helped them prepare this report, in particular the stakeholders and representatives of the sky lantern and helium balloon industry.

Finally, grateful thanks to Defra and Welsh Government for their co-operation, help and assistance, particularly with providing access details for stakeholders.

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1. Executive Summary

There is increasing concern, from a wide range of stakeholders about the possible impacts of sky lanterns and helium balloons on livestock and the environment. Particular concerns include the perceived risks to animal welfare through ingestion of debris, litter in the countryside, the sea and on the coastline, risks to aviation and impacts on coastal rescue services. Since sky lanterns contain a naked flame, there are additional concerns about the fire risk to buildings, property and crops from uncontrolled landing.

To date, much of the evidence presented has been largely anecdotal in nature. This study, jointly commissioned by English and Welsh Governments aimed to establish a robust and dependable evidence base to help inform any future decisions that may be made on sky lanterns and helium balloons, for example restrictions on sale and / or use. Risks were identified and assessed in relation to livestock health and welfare, the environment (with particular reference to litter), fire risk, damage to marine life and consumer safety.

The following working definitions are used in this report:-

- Sky lanterns (also known as 'Chinese' lanterns): small hot air balloons typically around 100cm high and with a diameter of approximately 60cm; they are made of paper with an opening at the bottom where a small fire is suspended;
- Helium balloons: made of latex or foil, inflated with helium gas and typically 25cm to 30cm in height. Larger balloons, often used for commercial or advertising purposes are not within the scope of this report.

To gather evidence, the project team carried out a desk-based literature review and telephone interviews with key stakeholder groups.

The aim of the literature review was to identify and critically appraise evidence on the impacts of sky lanterns and helium balloons on livestock health and welfare and the environment. An online scientific research database was used to identify peer-reviewed journals. In addition, non-scientific literature was reviewed from the popular farming press and from national, regional and local news websites. Material from key lobby organisations and special interest groups was also appraised. The focus of the review was primarily on England and Wales, but additional evidence was collected from other EU Member States, particularly where a ban or restriction on the use of sky lanterns and mass release of helium balloons has already been instigated.

In preparation for the telephone interviews, an official letter from Defra and the Welsh Government was sent to interested parties (a total of 92 recipients), encouraging them to contact the project team if they wished to provide evidence. A structured telephone interview form was designed and finalised in agreement with Defra and the Welsh Government. A second form was developed specifically for use with representatives of the sky lantern and helium balloon sectors, to enable additional information to be collected on market size, trends and the value of these products in England and Wales. Overall, 10 stakeholders gave evidence via a telephone interview and 23 provided written information following an initial telephone contact.

The results of the desk review and the telephone interviews were summarised in a matrix format. A number-based scoring system was used, so that data were assessed for independence, reliability and robustness. In total, over 150 references were considered but only 74 of these were eventually selected as evidence relevant to this study. Seven potential impacts were reviewed and for each, the evidence collected was considered separately for

sky lanterns and helium balloons. The main conclusions in relation to the present situation in England and Wales are as follows:-

1 Risks to livestock and animal health (including marine animals)

Anecdotal reports and media coverage suggest widespread concern from farming groups and others over the impacts of sky lanterns on the health and welfare of livestock and horses. However, the evidence reviewed indicates that the number of cases reported each year of animals affected through panic and fright and of ingestion of sky lantern debris is very small. It is recognised that there may be a significant level of under-reporting and that some businesses may be more vulnerable if they are close to and downwind of an event location. On the basis of the evidence presented, it is difficult to conclude that the overall impact is anything other than of minor significance.

The main concern regarding helium balloons is in relation to ingestion by animals. Whilst there may again be a significant level of under-reporting, the current evidence indicates that the impact is very small and confined to only isolated incidents.

Any harm to marine life often goes unseen, given the inaccessibility of habitats. More detailed diagnosis and improved recording of land-based incidents in future would enable the extent of the risks to be more accurately quantified.

2 Fire risk (sky lanterns only)

Incidents in which sky lanterns were said to be directly implicated in starting fires have been reported from a variety of sources, including the Chief Fire Officers Association (CFOA). Given that any of these individual incidents has the potential to cause significant disruption, loss of property and risk to human and animal life, the project team has concluded that fire risk associated with the use of sky lanterns is significant. Further consideration is required regarding potential mitigation options, which should consider both the *use* and the *design* of sky lanterns. Whilst some manufacturers have sought to improve sky lantern design and thus reduce the associated fire risk, others have been less proactive.

3 Impacts on the environment, littering on land and at sea

The project team concluded that the contribution of sky lantern debris to overall environmental littering is small and less significant than potential fire risks and risks to aviation and coastal rescue services. However, the localised effects of littering can be large in certain areas. Recent surveys have enabled evidence to be collected in relation to litter from helium balloons and from these the project team has again concluded that this is only of minor significance. Speed of degradation of balloon debris is an important factor and the currently-available evidence on the rate of latex degradation is considered inconclusive. Clarification would provide useful evidence of the extent to which balloon litter is likely to contribute to the overall environmental impact.

4 Risks to aviation

The Civil Aviation Authority (CAA) has provided quantifiable evidence of 48 incidents reported to be due to sky lanterns and helium balloons between 2001 and 2012, with sky lanterns accounting for 40 of these and only four of the remaining eight being due to small helium balloons (the focus of this report). When airborne, sky lanterns pose a safety risk to aviation due to possible ingestion into engines. When aircraft are on the ground, sky lantern debris can pose a risk to taxiing aircraft and cause delays to take-off and landing. CAA guidelines state that sky lanterns should not be released within 10 nautical miles of an airfield, but it is unlikely that the casual user is aware of this. Furthermore, there is an inconsistency between these guidelines and typical product guidance provided with sky lanterns. We conclude that there is a clear need for better consumer information from suppliers that is consistent with CAA guidelines.

The risk to aviation from helium balloons is due to aircraft manoeuvring to avoid them. Mass release of balloons is seen as a potential problem but industry codes of conduct stipulate the need for compliance with CAA guidelines. No information was presented to the project team to suggest that additional control measures are needed.

5 Risks to coastal rescue services

The project team has concluded, on the basis of well-documented evidence received that sky lanterns pose a significant risk to the proper and effective operation of coastal rescue services. The risk is due to sky lanterns, particularly when **red** sky lanterns are deployed, being mistaken for distress flares. It is concluded that the most practical mitigation to reduce the risk of false call-outs would be the introduction of a voluntary ban on the sale of **red** lanterns. Data from the UK Maritime and Coastguard Agency (MCA) indicates that the number of false call-outs likely to have been caused by sky lanterns increased to a peak in 2010. Incidents in subsequent years have been lower. No evidence has been found of any adverse impacts of helium balloons on coastal rescue services.

6 Risks to consumer safety

There is very little evidence to link either sky lanterns or helium balloons with risks to consumer safety at present. This is in marked contrast to the well-documented risks associated with fireworks.

7 Helium resources (helium balloons only)

Public concerns over the possible depletion of helium reserves to inflate balloons are countered by industry insistence that the helium is sourced from recycled gas previously used in the medical industry, subsequently mixed with air. It has not been possible to make an informed assessment of the impact on helium reserves, but widely-reported increases in the market price of helium may have a self-limiting effect on non-essential uses, including balloon filling, in the future.

The Sky Lantern and Helium Balloon Sectors

The sky lantern sector does not have a dedicated trade body to represent and co-ordinate the activities of suppliers and facilitate sector-wide initiatives. Improved designs which could reduce risks are already widely-available but have not been universally adopted by all manufacturers. In contrast, the helium balloon sector is well-represented by trade organisations and is able to demonstrate considered and tangible evidence of the sector's commitment to minimising risks.

The current annual turnover of the UK sky lantern market is variously valued at between £6m and £16m, based on an estimated average retail price of £2 per unit. There is evidence that the size of the market has recently contracted. The companies supplying sky lanterns tend to be small in terms of the number of employees and it is concluded that there are probably fewer than 100 individuals directly employed within the sector in the UK. The retail value of the UK market for helium balloons was estimated to be around £150m in 2012. Data has been provided on the number of businesses involved and people employed but there may be a degree of duplication and it is not clear that the numbers quoted relate to businesses that are solely engaged with the balloon sector. Nevertheless, this sector is associated with a significant level of economic activity.

2. Introduction and Methodology

2.1 Background

There is increasing concern about the possible impacts of sky lanterns and helium balloons on livestock and the environment. Particular concerns include the perceived risks to animal welfare through ingestion of debris, litter in the countryside, the sea and on the coastline, risks to aviation and impacts on coastal rescue services. Since sky lanterns contain a naked flame, there are additional concerns about the fire risk to buildings, property and crops from uncontrolled landing.

These concerns have been expressed by a wide range of stakeholders, including the farming and aviation sectors, the UK fire and rescue services and charity organisations such as Keep Wales Tidy, the Marine Conservation Society and the RSPCA. Issues relating to sky lanterns and helium balloons have been given media coverage in recent years, particularly in the agricultural press and on television.

To date, much of the evidence presented to Governments in both England and Wales about the impacts of sky lanterns and helium balloons on livestock and the environment has been largely anecdotal in nature and it has been difficult to quantify the risks because of the lack of reliable and robust information.

2.1.1 Working definitions

Sky lanterns: also known as ‘Chinese’ lanterns are small hot air balloons typically used at celebratory or commemorative events. They are made of paper with an opening at the bottom where a small fire is suspended. They are typically 100cm high with a diameter of approximately 60cm.

Helium balloons: a coloured latex or foil balloon inflated with helium gas and sealed at the neck typically used as a children’s toy, party accessory or decoration. They are typically 25cm – 30cm in height. The scope of this report does not include larger balloons used in commercial applications, for example weather balloons and large tethered balloons (often in excess of 5m long) used for advertising purposes.

2.2 Objectives of study

This study was jointly commissioned on 9 January 2013 by English and Welsh Governments in order to establish a robust and dependable evidence base to help inform any future decisions that may be made on sky lanterns and helium balloons, for example restrictions on sale and / or use.

Overall, the study aimed to identify and assess the risks associated with sky lanterns and helium balloons to livestock health and welfare, the environment (with particular reference to litter), fire risk, damage to marine life and consumer safety.

In particular, the key objectives of the project were as follows:

Objective 1

To gather evidence, through a desk-based literature review and telephone interviews with key stakeholder groups (as listed in 2.3.2).

Objective 2

To evaluate the evidence gathered in Objective 1, develop a robust and in-depth evidence base on the impacts of sky lanterns and helium balloons and draw conclusions as appropriate. This will help inform the Government's response to any call for action in England and/or Wales.

Objective 3

To prepare and deliver a final report in English with an Executive Summary translated into Welsh.

2.3 Methodology

The study was carried out during January to April 2013 and the approach is set out below. Table 1 summarises the timing of key inputs:

Table 1 Overview of key project inputs

Input	Key Dates 2013
Project start date	9 January
Project inception meeting with Defra, WG	11 January
Introductory letter sent out to stakeholders	15 January
Follow-up letter to stakeholders	4 February
Completion of structured telephone interview form	30 January
Undertake literature review	4 February to 21 March
Carry out stakeholder interviews	11 February to 5 March
Analysis and report drafting	26 February to 12 April
Meeting with Defra, WG to discuss preliminary findings	8 March
Preparation of first draft report	15 March
Preparation of final report	16 April

Objective 1- Evidence Gathering

2.3.1 Desk-based literature review

The aim was to identify, review and critically appraise evidence on the impacts of sky lanterns and helium balloons on livestock health and welfare and the environment, with particular reference to littering and damage to marine life. The scope of the review included peer-reviewed journals and grey literature, i.e. non-scientific literature websites such as those of the popular farming press, and national, regional and local news websites. Material from the key lobby organisations and special interest groups was also reviewed.

The focus for the literature review was primarily on evidence relating to England and Wales, but reference is also made to evidence from other EU Member States where a ban or restriction on the use of sky lanterns and mass release of helium balloons has already been instigated.

Key references that have been assessed include:

- Scientific literature from research databases;
- General position statements released by local authorities;
- Farming industry related sources such as: National Farmers Union (NFU), Women's Food and Farming Union (WFU), Farmers Union of Wales, Farmers Guardian, Farmers Weekly;
- Government agency sources, such as Environment Agency, Food Standards Agency, Animal Health and Veterinary Laboratories Agency (AHVLA);
- Key association publications e.g. Local Government Association, Country Land and Business Association (CLA), Chief Fire Officers Association (CFOA), Civil Aviation Authority (CAA); and
- Local/regional news articles.

To carry out the scientific section of the literature review, the online scientific research database 'Scopus' was initially used. Other research databases were used at the discretion of the project team to give a wider overview of available literature. The review included a list of search terms including (but not restricted to), 'sky lanterns OR Chinese lanterns OR helium balloons AND mass release, litter, environment, fire, crop damage, aviation, human health and livestock health and welfare'. The review also included a search on the effects of other litter-based hazards to livestock and the environment using search terms including (but not restricted to), 'fireworks and plastic bags'.

2.3.2 Telephone interviews with key stakeholders

The aim was to seek information and evidence of impacts in relation to helium balloons and sky lanterns from a range of different stakeholders, including suppliers, relevant authorities and other sectors which may be affected.

Planning and delivering the telephone interviews involved a number of steps:

a) Preparation of an official letter by Defra and the Welsh Government, dated 15th January 2013 (Appendix 1). The objective was to inform interested parties that the project was underway and that they might be contacted by ADAS to get their views on the subject. The letter was sent by Defra and the Welsh Government, to a total of 92 recipients using existing key stakeholder lists held by them under the following categories:

- Local authorities in England and Wales;
- Veterinary and farming groups, e.g. the British Veterinary Association (BVA) and National Farmers' Union (NFU);
- Fire Services and HM Coastguard;
- Charities, for example Marine Conservation Society (MCS), Keep Wales Tidy (KWT), RSPCA, RSPB;
- Sky lantern and helium balloon suppliers and distributors;
- Other government departments with a related interest e.g. Business Innovation and Skills (BIS), Department for Communities and Local Government (DCLG); and
- Other EU Member States.

b) This initial letter was followed-up by a further reminder letter (Appendix 2) on the 4th February 2013 to actively encourage interested parties to contact ADAS if they wanted to provide evidence to the project team. A list of interested parties for subsequent interviews by ADAS was compiled.

c) A structured telephone interview form (Appendix 3a) was designed and finalised by ADAS in agreement with Defra and the Welsh Government. A key objective was to ensure that the form captured as much empirical evidence as possible from stakeholders. A second stakeholder interview form (Appendix 3b) was designed specifically for the sky lantern and helium balloon industry. This was sent principally to the recognised associations for the leisure, hospitality and party industries including NABAS (The National Association of Balloon Artists and Suppliers, commonly referred to as the Balloon Association) and BAPIA (The Balloon and Party Industry Alliance).

d) Telephone interviews were carried out between 11th February and 5th March 2013. Stakeholders either provided verbal information by telephone interview or, following a telephone discussion, they completed the interview framework in the form of a written response or provided written evidence as a personal response. Overall 10 stakeholders gave evidence via a telephone interview and 23 provided written information, following an initial telephone contact. The organisations consulted are listed in Appendix 4 and included:

- Farming groups including the National Farmers' Union (NFU), Farming Union of Wales (FUW), Country Landowners and Business Association (CLA), Women's Food and Farming Union (WFU) and the Rural Farming Networks (RFN) across the country;
- Veterinary groups including British Veterinary Association (BVA), British Cattle Veterinary Association (BVCA), British Veterinary Zoological Society (BVZA) and the Goat Veterinary Society (GVS);
- Nominated local authority contacts;
- Nominated fire service contacts such as the Chief Fire Officers Association (CFOA);
- Marine and Coastguard Agency (MCA);
- Aviation authorities including the Civil Aviation Authority (CAA) and selected airports;
- Sky lantern retailers and distributors;
- Helium balloon manufactures and distributors;
- Charities and vested interest groups such as Marine Conservation Society and Keep Wales Tidy;
- Other government departments, including the Department for Business Innovation and Skills (BIS) and the Department for Communities and Local Government (DCLG);
- Selected EU Member States with an interest in the subject, confirmed from the desk review; and
- Insurance companies.

The telephone interviews with stakeholders (excluding those from the supply industry), provided an indication of the number of incidents associated with sky lanterns and helium balloons, their impact on livestock and the environment and whether or not the number of incidents has increased in recent years. They also provided information on possible seasonal, regional and geographic links or trends.

The telephone interviews with the sky lantern and helium balloon industry helped to build a picture of the estimated market size and value of these products in England and Wales, and

to provide background information on trends, trade implications, sales outlets and any regional differences in use.

Objective 2 - Evaluation of evidence

2.3.3. Evidence evaluation tool

The search results from both the desk review and the telephone interviews were summarised in a matrix format (see Appendix 5). To assist the evaluation of data, a number-based scoring system was used so that data were assessed for:

- **Independence** - the quality of the evidence based on the independence of the author;
- **Reliability** - the quality of the evidence based upon the information behind it, i.e. anecdotal or study based; and
- **Robustness** - the quality of the evidence based on whether there are clear causal links with sky lanterns or helium balloons.

Key factors considered included the date published, references cited, accuracy of information and potential bias. In total, over 150 references were considered but only 74 of these were eventually selected as evidence relevant to this study. These are summarised in Appendix 5.1 – 5.7.

Information gathered from the literature review and telephone interviews was used by the project team as the basis for assessing the impacts of sky lanterns and helium balloons. These are set out in Section 3. Where possible, this includes a quantitative assessment, otherwise a qualitative narrative is provided.

3. Review of Impacts

The following impacts were reviewed:

- 3.1 Livestock and animal health (including marine animals);
- 3.2 Fire risk and damage to crops and property;
- 3.3 Impact on the environment, including littering on land and at sea;
- 3.4 Risks to aviation;
- 3.5 Risk to coastal rescue services;
- 3.6 Risk to consumer safety; and
- 3.7 Threat to helium resources.

For each impact, the evidence collected was reviewed separately for sky lanterns and helium balloons and the main findings are set out below. Where appropriate, these impacts were compared to those relating to other devices such as fireworks, as requested in the ITT for this project.

Tables summarising all the information collated are shown in Appendix 5. Where the relevant information was available, numbers and types of incidents reported and recorded have been included.

3.1 Livestock and animal health (including marine animals)

3.1.1 Livestock and horses

Whilst airborne, both sky lanterns and helium balloons have potential to cause welfare issues to animals – most notably by causing panic and fright. On falling to earth, there is the possibility that debris from lanterns and balloons will be consumed by livestock and other animals.

Evidence gathered from articles, reports and personal interviews is collated in Tables 5.1.1 and 5.1.2. When reviewing the evidence collected, it became clear to the project team that there appeared to be a degree of overlap between some individual reports – i.e. the same incident being reported in separate articles and/or being referred to in personal interviews. Simply totalling the number of specific incidents cited may therefore give a false impression as to the true extent of the issue and so for this reason the project team paid particular attention to cross-referencing reports in an attempt to determine the most representative overview.

Sky lanterns

Impacts on animal behaviour

It has been suggested that airborne sky lanterns can create fear and panic in animals as they pass overhead. From the evidence available, this issue was more generally associated with the impact on horses. For example, there were nine anecdotal accounts¹ posted by British Horse Society (BHS) members over the period 2010 – 2013 of horses that were reported to have been ‘spooked’ (although not injured) as a result of sky lanterns flying nearby. ADAS understands that the BHS has a membership of around 75,000 from approximately 550,000 horse owners / careers and an estimated population of almost one million horses and ponies in Great Britain. This evidence from the BHS was the only source that specifically referred to the impact of sky lanterns on animal behaviour although a number other reports alluded to this as a possible outcome of lanterns landing in fields containing livestock.

It is important to note however that this potential impact may not be solely related to sky lanterns. Other flying objects – most notably full-size hot air balloons (although not within the scope of this report) – have been reported anecdotally to cause alarm to horses.

Ingestion of lantern debris

In recent years there have been reports of livestock or other animal loss, including cattle, horses, sheep and goats as a result of ingestion of parts from sky lanterns. This could occur either as a result of ingestion of lantern debris left on the field or through ingestion of wire or bamboo fragments in forage, due to lantern debris being picked up in forage harvesting equipment. The possible consequences of sky lantern ingestion (as highlighted by the sources in each case), include: penetration of the reticular/rumen wall, penetration of the heart, initiation of infection within the chest cavity, rupture of an abdominal blood vessel and development of chronic localised peritonitis, causing further chronic digestive problems.

The most reliable evidence of wire ingestion being the cause of animal death is that provided by post mortem examination by a veterinary surgeon and a number of such cases are cited in Table 5.1.1 and 5.1.2. Establishing a clear link between the wire recovered on post mortem and the source (in this case sky lanterns) is problematic and has been largely done

¹ www.horseaccidents.org.uk

on the basis of wire gauge. That is, lantern wire is much higher gauge (thinner) than other potential sources such as fencing wire. Although the technique is not infallible, the evidence suggests that cases reported via post mortem can be used as an accurate reflection of animal losses due to ingestion of sky lantern wire debris.

The evidence presented to the project team of specific cases of injury or death to livestock and horses came from 11 separate sources (two press articles and nine personal interviews) and spanned the period 2010 to 2013. Of these reports, a total of 16 cases were cited of injury or death to cattle, sheep or horses which were attributed to wire from sky lanterns. Twelve of these cases (75%) were reported to have been confirmed by post mortem examination. Whilst the latter is helpful in establishing the veracity of the majority of the reports in question, it is important to note that the total number of cases actually reported to the project team was very small. It is possible however that there may be a significant level of under reporting by veterinary surgeons and others.

In recent years there have been attempts by some manufacturers to produce lanterns that are less likely to lead to ingestion problems for livestock. For example, lanterns are now available where the wire used to hold the fuel cell in place has been replaced with string or similar material. Similarly, some designs now use bamboo instead of wire to provide structure to the lanterns. However these design enhancements have not been universally introduced and in the case of bamboo, it has been suggested that sharp splinters may be produced if the bamboo is chopped-up in forage harvesting equipment. These may pose risks to livestock health and welfare, although there were no reported incidents in the evidence reviewed by the project team.

Another approach to addressing the problem of ingestion, as reported by the BBC (February 2013), is to insert a magnet into the stomach of cattle. The rationale was that the magnets would attract wire fragments as well as other metal debris such as nails and fencing materials, thereby preventing damage to the stomach wall. It is not however clear whether this approach has been effective or not.

In summary, despite what appears to be widespread concern over behavioural impacts and possible ingestion, the evidence provided to the project team indicates that the number of cases reported each year (whether anecdotal or supported by post mortem) is very small in the context of the wider livestock population. It is however recognised that there may be a significant level of under-reporting at present and that the true impacts may be much higher. Notwithstanding the possibility of under-reporting of incidents, on the basis of the evidence presented here it is difficult to conclude that the overall impact on the livestock sector of sky lantern use is anything other than of minor significance. However, local effects may be important for some individual businesses, e.g. if downwind from an event location.

Helium balloons

The main health and welfare concern associated with helium balloons is the risk of animals choking (and potentially dying), following ingestion of balloon debris.

Only four reports were provided to the project team (two press/TV reports and two personal communications) and of these, only two reports actually cited cases which resulted in choking and/or death of the animal. One report (verified by post mortem) involved choking and death of a pedigree cow and the second (anecdotal) related to choking in a goat, although it is unclear whether this resulted in the death of the animal concerned.

Whilst there may be a significant level of under-reporting (as was also noted above for sky lanterns), the project team has concluded from the evidence provided that the impact of helium balloons on livestock and horse health and welfare is very small.

3.1.2 Marine animals

Concerns relate to direct ingestion of sky lanterns or helium balloons by marine animals and also their potential contribution to marine debris – both in water and along the shoreline. The main sources of information were peer-reviewed journals, news articles and information provided by environmental organisations. A total of 18 reports were reviewed and these are shown in Appendix 5.1. There was some specific mention of sky lanterns and balloons in these, although the information was more concerned with plastic debris in general.

It is clear that, given the inaccessibility of habitats, any harm to marine life, from whatever source often goes unseen and cases can usually only be recorded when marine life is washed ashore and the impacts can be seen.

Sky lanterns

There were no reported incidences of sky lanterns affecting the health and welfare of marine life. It is unclear whether species of marine life would ingest parts of a sky lantern if it landed nearby.

Helium balloons

There has been one recorded death in the UK, this related to a juvenile green turtle near Blackpool in 2001. Post mortem examination revealed a balloon in the stomach of the animal but this was in addition to other pieces of plastic litter, which makes determining the exact cause of death difficult. No other cases in the UK were reported which resulted in injury or death.

3.2 Fire risk and damage to crops and property

Sky lanterns contain a fuel source that keeps an exposed flame alight, allowing hot air to build up inside the lantern and causing it to float. This flame could pose a fire risk. The project team evaluated 19 separate pieces of evidence – 13 from press articles and TV reports and the remaining six from stakeholder contributions. This evidence spanned the period from 2006 to 2013 and is documented in Appendix 5.2.

Sky lanterns

Sky lanterns float up into the air and remain airborne for as long as they are filled with hot air. Therefore, they should only fall back to the ground when the fuel cell flame is extinguished. In practice, the evidence suggests that this is not always the case, and lanterns sometimes drift back to land whilst still alight. This can be due to inherent design and construction weaknesses and/or to ineffective launching procedures or release in high winds. The result is that the lantern could fall to the ground whilst still alight and could set fire to the canopy – particularly if the lantern is not made of flame retardant material. This could then become a significant fire hazard.

Much of the reported evidence of fire impacts from sky lanterns is anecdotal or reported in news articles, validated in some cases by evidence from the Chief Fire Officers Association (CFOA). The risks are mainly with respect to:

- Fires in agricultural crops;
- Fires in buildings; and
- Wildfires on moorland or similar land.

The most definitive source of evidence from the 19 of those provided to the project team was from the CFOA. They conducted a survey between 2009 and mid 2011 to evaluate the impact of sky lanterns on fire risk incidents, in response to a feature on a BBC television programme. This UK-based study was conducted among 60 fire and rescue services (FRS) and 42 responded (70% participation). Among the findings from this survey were:

- 186 call outs (121 incidents; 65 false alarms) to sky lantern-related incidents, reported by 26 FRSs, representing 62% of those responding to the survey; and
- 26 out of the 42 FRSs that responded had issued warnings on sky lantern use (62%).

The frequency of FRS call-outs thought to be related to sky lanterns was reported to have increased over the period of the survey, with 17 call-outs reported in 2009 and 82 cases in 2011. Whether this was due to an increase in the use of sky lanterns over the period in question or to increased awareness from the public of the potential risks is not certain. In addition, the project team were not able to establish whether there were any seasonal trends in reported cases. It could be that sky lantern releases peak at certain times, such as Halloween, New Year. The issue of sky lanterns is not believed to be a key focus for CFOA at present, and it is understood that they have no plans to conduct any follow up research on the subject.

Fourteen of the remaining 18 reports (from the 19 in total) cited cases where sky lanterns were said to be directly implicated in starting fires in a variety of agricultural and non-agricultural settings. Crop-related damage has been reported to both standing and stored crops and to fields after harvesting. Examples include 10 hectares of standing cereals reported to have been set alight in Oxfordshire in August 2009 (interview) and seven hectares of barley in Oxfordshire set alight in 2010 (literature).

A number of 'wildfire' incidents (un-controlled fire in an area of vegetation) have been reported to be caused by sky lanterns. These include eight fires in Dorset over the period 2008-2011 and an incident in Northumberland, caused by a lantern which took 20 fire fighters four hours to extinguish (according to local press). Wildfires represent a danger to human life and biodiversity (e.g. risks to rare nesting birds in heath and moorland). Concern about wildfires is growing, due to the increasing frequency of extreme weather events such as drought, which leads to drier vegetation that is more prone to ignition.

Because of the risk of double-counting of individual incidents, it is difficult to quantify the exact number of fires or 'near-misses' that may have been attributed to sky lanterns. However, on the basis of the available evidence, an estimated (minimum) of 81 separate events have been identified over the period 2009 to 2013. Given that any one of these individual incidents has the potential to cause significant loss of property and risk to human and animal life, the project team have concluded that fire risk associated with the use of sky lanterns is significant and one that warrants further consideration regarding potential mitigation options.

Discussions with sky lantern suppliers confirmed that they have been working with manufacturers to develop products that are considered to be safer and present a reduced fire risk. This has largely focussed on the increased use of flame retardant materials in the construction of the canopy and the inclusion of non-drip fuel cells. These are now widely (but not universally) available through internet suppliers and other sources and are generally advertised as being 'eco-friendly'. Whilst this development can be viewed as being very positive; further mitigations – mostly associated with *use* rather than *design* still need to be identified and implemented. During discussions with two lantern suppliers a number of possible mitigation measures were suggested. These were:

- Improved user launch instructions indicating wind speeds over which lanterns should not be released (one product guidance note suggests 5mph max).
- Not launching lanterns with damaged canopies, as this will lead to premature landing whilst still alight.

A good example of consumer advice on the use of sky lanterns is included as Appendix 7a. At the present time, there is no single trade body representing and co-ordinating the activities of sky lantern suppliers which means that developing and implementing improved lantern design and/or better consumer guidance is left to the discretion of the individual supplier.

Helium balloons

No incidents of damage to crops or property from helium balloons were reported to the project team.

3.3 Impacts on environment, littering on land and at sea

When sky lanterns and helium balloons fall back to land or on to the sea, they are usually some distance away from their point of release, and they are then generally described as 'litter'. There is a range of evidence on the possible impacts of sky lantern and helium balloon litter on the environment including scientific journals, information released by independent bodies and qualitative information gathered through interview. These have all contributed to the evidence base gathered and are summarised in Appendix 5.3.

The project team reviewed evidence from 11 separate sources (7 literature sources and 4 from personal interviews). The majority of the evidence focused exclusively on the impact of helium balloons (7 out of the 11 reports) which probably reflects the greater concerns over balloon littering, compared to that associated with sky lanterns.

Sky lanterns

The evidence provided in both the literature and from personal interviews was largely anecdotal and in the case of the personal interviews, respondents described sky lantern debris being picked up on a (more) regular basis from horticultural land and from hedges and roadsides. However in both cases, it was not described as being a problem of major significance or concern.

Although specific evidence was not available, it is likely that sky lantern debris will be intermittent and localised and more likely to affect agricultural holdings and wildlife habitats on the fringes of urban areas where release of lanterns is more likely. In addition, littering in a given area would probably be greater following mass release of sky lanterns that subsequently follow the same flight path. This means that farms closer to venues that regularly host events where lanterns are released may be affected more frequently by lantern debris than others in more 'remote' areas.

On the basis of the evidence presented, the project team concluded that the contribution of sky lantern debris to overall environmental littering is small. By comparison, other potential impacts of sky lanterns – most notably potential fire risks and risks to aviation - are of much greater significance.

Helium balloons

Concerns regarding balloon litter *per se* are largely associated with the negative visual impacts to beaches, amenity areas and wildlife habitats, etc. and with the associated clean-up costs. The wider impacts of balloon littering, such as risks to animals, wildlife and marine life, are discussed in an earlier section of this report.

The balloon and party industry organisations including the National Association of Balloon Artists and Suppliers (NABAS), the Balloon and Party Industry Association (BAPIA) and the European Balloon and Party Organisation (EBPA) are aware of the potential impacts of helium balloons as litter. They advocate the use of 100% natural latex balloons for races and similar mass launches, because this is claimed to biodegrade more rapidly than foil (see also Section 4.3) and no ribbon or string attached. Where foil balloons are used (normally for party decorations and as children's toys), it is recommended that these should be attached to a suitable weight to ensure they are not released into the environment.

Evidence of the extent of balloon littering has been drawn from two separate sources. The Marine Conservation Society's 'Beachwatch' survey provides valuable and quantifiable information on balloon litter on UK beaches. This survey is conducted by volunteers on a representative sample of beaches in the UK on the third weekend in September every year. Whilst balloon litter rose from an average of 3.4 items/km beach surveyed in 1996, to a peak of 11.5 items/km beach surveyed in 2007, it has subsequently fallen back in recent years to 9.5 items/km recorded in 2011 (MCS, 2012). In the most recent survey, rubber items as a whole (including balloons, tyres, gloves, etc) constituted 2.3% of all litter, of which balloons made up 0.5%.

Further independent investigation on balloon litter is provided from surveys undertaken by Keep Wales Tidy (KWT) and the Marine Conservation Society MCS). KWT conduct regular litter surveys within local authority areas of Wales as part of the Local Environmental Audit and Management System (LEAMS). These surveys involve analysing 50 metre sections of randomly-selected adopted highways, representing 8% of the total highways in Wales. In one local authority area in the 2008/09 survey year, balloon litter was found on 17% of surveyed streets. In the 2010/11 survey, balloon litter was found on 1% of all streets surveyed for litter. It is worth noting that the LEAMS survey does not include any green areas such as parks or gardens.

The potential impacts of helium balloon debris have long been recognised, and work by Burchette (1989) suggested that 'latex rubber balloons degrade about as fast as oak tree leaves under a wide range of exposure conditions in the environment including sunlight, weathering, soil, and water exposures'. Burchette further suggested that from a typical release of 500 balloons, only 10% would fall back to earth as litter and as such the density of balloon fall would be no greater than one balloon in over 15 square miles. This evidence has been used previously to suggest that latex balloons do not pose a significant threat to the environment in terms of littering. The evidence provided by Burchette has since been evaluated by KWT in a policy paper (2008). The critique raises concerns over the methodology of the original work and casts doubt over the speed at which balloon litter degrades. The latter finding was supported by work done by the MCS, which suggests that even 'biodegradable' latex balloons can take several months or even years to break down.

On the basis of the evidence presented, there have been some increases in balloon litter in recent years. However when compared to other forms of litter (e.g. plastic bags, etc.), the number of items found is relatively small, with balloons making up less than 1% of all litter found. As a source of litter *per se*, the project team has concluded that helium balloons are therefore of only minor significance. Speed of degradation of balloon debris is important both from the perspective of littering but more particularly from the standpoint of risks to animals,

wildlife and marine life. Currently available evidence on speed of latex balloon degradation is considered inconclusive, in view of the doubts cast by KWT on the work reported by Burchette.

Marine debris

Evidence from outside the UK suggests that the presence of marine debris can lead to movement of invasive species into new marine ecosystems which could in turn cause potential damage to the species already established there (Derraik *et al.*, 2002). Marine debris may also have an impact on parts of delicate underwater habitats such as coral reefs that are critical to the survival of many species. Although this is not directly applicable to UK seas, it is possible that marine debris of any kind could potentially have a negative impact upon marine ecosystems.

Because much of the focus of the available information was on the effects of plastics and other marine debris in general, it is difficult to draw robust and specific conclusions for sky lanterns and helium balloons. For example, Schuyler *et al.* (2012) highlighted studies where over 267 species worldwide have become entangled or have ingested marine debris, theoretically including debris from sky lanterns and helium balloons. A Belgian study by Cuykens *et al.* (2011) reported that around 95% of the corpses of all northern fulmars found along the Belgian beaches contained plastics, likely to have originated from domestic and commercial sources. Party balloons were described as commonly floating litter in the survey area, and while no specific mention was made of sky lantern debris, this could not be entirely ruled out.

Overall, the contribution of sky lanterns and helium balloons to marine litter is not well documented, although the evidence suggests that any contribution to the overall mix of marine and shoreline litter material, which surveys indicate has a high plastic content, is likely to be small.

3.4 Risks to aviation

Evidence on the possible risks to aviation from sky lanterns and helium balloons was compiled from a number of sources including news articles, scientific journals and information released by the Civil Aviation Authority (CAA) and individual airports. These have all contributed to the evidence base and are included in Appendix 5.4.

According to the CAA, sky lanterns pose a safety risk to aviation due to possible ingestion into engines whilst airborne. On the ground, sky lantern debris can delay departures or potentially cause damage to aircraft. The risks from helium balloons are considered to be from manoeuvring aircraft to avoid concentrations of these objects; ingestion into an engine is considered to be unlikely to cause damage. The CAA maintain that the risks from sky lanterns and helium balloons, although small, should be taken into account when making an assessment for any release (see CAA, 2011 '*Operation of directed light, fireworks, toy balloons and sky lanterns within the UK*').

The CAA has provided quantifiable evidence to the study. This is in the form of Mandatory Occurrence Reports (MORs) filed by airports with the CAA. The scope of these includes light aircraft, helicopters and large passenger planes. The objective of the MOR scheme is to contribute to the improvement of aviation safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. Any incident which endangers an aircraft, or which, if not corrected, would endanger an aircraft, its occupants or

any other person should be reported to the CAA as an MOR². MORs are filed by all airports/airfields by individual operators although they tend to differ in their level of detail and description of the incident reported.

Overall, there have been a total of 48 MORs involving sky lanterns and helium balloons reported by the CAA over the period from 2001 to 2012. Of the eight MORs involving helium balloons, four were confirmed as being attributed to toy balloons, as opposed to weather balloons or similar (the latter being outside the scope of this study).

Sky lanterns

Since 2001, 40 MORs have been filed with the CAA in relation to incidents involving sky lanterns (see Appendix 5.4). Some 18% of these related to sky lanterns passing over or near an airfield, 54% were in relation to the recovery of debris on the airfield, whilst the remaining 28% were incidents of sky lanterns passing close to an aircraft in flight. Incidents relating to lantern debris on runways and taxiways are classed in CAA reports as 'Foreign Object Debris' (FOD).

Reports relating to sky lanterns passing close to aircraft in flight mainly relate to take-off or the final approach to landing. None of the MORs reported any actual collisions between aircraft and lantern(s). Incidents of sky lanterns passing over or near an airfield were simply recorded as 'observations'.

The CAA recognises sky lanterns as a specific risk to aircraft safety whether they are airborne, or as FOD on an airfield. Given that the MOR is an incident which could endanger the safety of an aircraft and its passengers, it follows that all 40 MORs involving sky lanterns are deemed to be evidence of a potential risk to aircraft safety. To reduce the risk of sky lantern incursions, CAA guidelines³ state that sky lanterns should not be released within 10 nautical miles of an airfield. Whilst these requirements are covered in the '*Operation of directed light, fireworks, toy balloons and sky lanterns within the UK*' (CAA), it is unlikely that the casual user of sky lanterns will have access to this document and any guidance they may have received will inevitably be that provided with the lantern when purchased.

The number of MORs linked to sky lantern use also indicates that the 10 mile separation distance is not being met consistently for lantern release. This may not however reflect blatant disregard of CAA guidance by consumers because current product guidance provided with sky lanterns (Appendix 7a) states that CAA permission should be sought if lanterns are to be released within '5 miles of an airport or landing strip'. This apparent mismatch between CAA guidelines and instructions provided by lantern suppliers clearly points to the need for better consumer information from suppliers that is consistent with the CAA position.

² Information on MORs can be found in [CAA \(2011\) Mandatory Occurrence Reporting Scheme:
http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=214](http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=214)

³ Sky lanterns and toy helium balloons are not specifically covered within the Air Navigation Order 2009 and therefore minimum distances between launch of lanterns or balloons are *guidance* and not legal requirements. However all activities of this type are likely to be covered by paragraph 137 that deals with 'Endangering safety of an aircraft'. This states that 'a person must not recklessly or negligently act in a manner likely to endanger an aircraft, or any person in an aircraft'.

Helium balloons

The release of helium-filled toy balloons near airfields is deemed by the CAA to present a risk to aircraft safety, hence it is covered within the CAA guidelines '*Operation of directed light, fireworks, toy balloons and sky lanterns within the UK*'. The risks relate specifically to the risk of pilots having to manoeuvre aircraft to avoid concentrations of balloons. Although ingestion into aircraft engines is recognised as a possible outcome of contact between helium balloons and aircraft gas turbine engines, the CAA do not consider this to present a risk to safety.

MORs filed since the year 2000 confirm a total of eight incidents related to helium balloons. Of these, four are described as children's toy balloons (within the scope of this project), two are defined as 'met balloons' (outside the scope of this project) and for the remaining two incidents the type of helium balloon is not described. All of these are summarised in Appendix 5.4. The four events involving toy balloons all related to airborne incursions, the incidents involving collision with the aircraft and/or ingestion into an engine. However none of the events resulted in damage to aircraft.

Whilst the number of MORs related to helium balloons since 2000 is very small in number, mass release of balloons is recognised as posing a particular risk to aviation safety and releases near to airports (within 5 nautical miles as stipulated by the CAA) 'should be restricted'. Industry codes of conduct for balloon releases stipulate the need for compliance with CAA guidelines for balloon releases (BAPIA), or that the CAA should be consulted for all balloon releases over 5,000 balloons, or any release near to an airport (NABAS). Given the very small number of MORs reported in relation to helium balloon incursions, it would appear that CAA guidelines and supplier advice is largely being followed, whether inadvertently or otherwise.

On the evidence presented to the project team, it is concluded that current measures to manage the release of helium balloons seem to be largely effective in minimising collisions with aircraft and incursions onto airfields. Larger numbers of incidents involving sky lanterns may indicate a lack of adequate and appropriate guidance to consumers on safe release and this is an area that warrants further consideration.

3.5 Risks to coastal rescue services

Sky lanterns

The risks to coastal rescue services from sky lanterns arise from them being incorrectly identified as distress flares, particularly when **red** sky lanterns are deployed. This can trigger false call-outs, diverting essential emergency resources away from real emergencies and placing emergency services personnel at unnecessary risk. In addition, there can be significant financial costs associated with lifeboat launches and/or helicopter deployment and from diversion of merchant or navy vessels to provide emergency support.

The project team received nine separate responses on this subject, from a variety of sources most notably the Royal National Lifeboat Institute (RNLI), and the UK Maritime and Coastguard Agency (MCA). This information is summarised in Appendix 5.5. The MCA, responsible for HM Coastguard, provided information on the numbers of 'incidents' likely to be caused by sky lanterns. This is shown in Table 2 below.

Table 2 **The number of reported incidents likely to have been caused by sky lanterns**

Year	Number of incidents
2007	7
2008	49
2009	347
2010	754
2011	315
2012	207

Source: UK Maritime and Coastguard Agency

The incidents reported above range from those where the emergency operator has determined that the (supposed) red flare was actually a sky lantern and aborted any further action, to those where full deployment of search and rescue (SAR) vehicles was initiated. Following a peak number of incidents in 2010, numbers appear to have declined over the period 2011-2012.

Evidence from interviews and product information suggests that red distress flares typically burn for around 40 seconds, whereas sky lanterns may be visible for a much longer period. In theory, this should make it easier to differentiate between the two. However correct identification may be dependent on prevailing weather conditions. For example, a red sky lantern that disappears into cloud could more easily be misinterpreted for a distress flare than a lantern that stays visible in clear skies.

Whilst most of the evidence presented relates to sky lanterns causing false call-outs, the converse is that real distress flares may be 'ignored' because the observer mistakes them for sky lanterns and fails to report the incident. In terms of risk to human life, this scenario is of greater significance than the risk of false call-outs. This risk is mitigated to some extent at sea, because the 'default' position under international maritime law is for ships at sea to divert to investigate any form of red distress flare. The greater risk is in relation to an incident which is just off-shore and spotted by an individual on land.

The cost associated with false callouts includes the time taken by the operator to answer a call, through to deployment of lifeboats or helicopters. Costs for deploying vehicles range from £1,000 - £2,000 per hour for a lifeboat to between £7,000 and £10,000 per hour for an SAR helicopter to be deployed (excluding manned team costs). There can also be other costs associated with ships diverting to respond to a potential distress call. This economic loss can be substantial if for example, the ship fails to reach port when expected.

The project team concluded, on the basis of the well-documented evidence available, that sky lanterns do pose a significant risk to the proper and effective operation of coastal rescue services. This is based on the relatively large number of documented incidents where sky lantern use has given rise to false call-outs (although numbers may be decreasing) with associated impacts to human safety and financial costs of deploying rescue services.

Perhaps the most obvious mitigation to reduce the risk of false call-outs would be the introduction of a voluntary ban on the sale of red lanterns. Whilst this may not solve the problem entirely, it should bring about a significant reduction in false alarms. Increasing consumer awareness of the potential risk would undoubtedly help to reduce risks further irrespective of lantern colour. Some sky lantern suppliers already provide detailed consumer advice on the release of lanterns within five miles off the coast (see Appendix 8). However, given the number of cases still being recorded by the MCA, the indications are that this

information is not being provided universally to consumers and/or the guidance is not implemented consistently by those launching lanterns

Helium balloons

No evidence has been found, either through a literature search or by interview, of any adverse impacts on coastal rescue services from helium balloons.

Comparative impact of fireworks

Fireworks being discharged in coastal areas clearly have the potential to initiate false call-outs of the emergency services. The project team were not, however, able to gather specific information on the numbers of these false call-outs and so are unable to comment on the scale or extent of this particular risk or compare it directly to the number associated with sky lanterns.

Notwithstanding the lack of empirical information in this report, the fact that fireworks are well recognised as a particular risk has led to a variety of mitigation measures (both voluntary and statutory) being introduced. Amongst the most important are the requirements set out in the Firework Regulations 2004, SI no.1836. Included in these are statutory restrictions on when fireworks can be purchased and discharged. The most significant clause (paragraph 7) specifies a ban on firework use during 'night hours' (11pm to 7am) except on certain days of the year, such as November 5th and the Chinese New Year. Certain exceptions to this requirement are allowed, mainly in respect of professional operators and local authorities. In most situations, these requirements should significantly reduce the risk of false call-outs.

Without being able to directly compare the number of false call-outs associated with sky lanterns and fireworks, it is difficult to form a view as to whether statutory controls on sky lantern discharge (equivalent to those for fireworks) might be appropriate. However, the project team concluded that the most appropriate and proportionate approach to reducing this particular risk in the case of sky lanterns would be a voluntary ban on use of red lanterns and better consumer guidance.

3.6 Risks to consumer safety

Sky lanterns

There is very little evidence linking sky lanterns and helium balloons with risks to consumer safety. The project team were only able to identify one account from the BBC (2010) where a child suffered burns as a result of dripping hot oil and wax whilst standing underneath a lit sky lantern prior to release. The child suffered no lasting injuries.

The potential risk to human safety from a naked flame is recognised by the project team, emphasising the importance of carefully-worded product safety guidelines. Appendix 7a provides an example of instructions which stress the need for adults to supervise handling of the lantern and ignition of the fuel cell. Some sky lantern retailers have also developed non-drip fuel cells for lanterns for safer lighting.

Overall, the risk to consumer safety as a result of direct contact with sky lanterns is minimal. This is in marked contrast to the well-documented impacts of firework use on consumer safety which are summarised below.

Helium balloons

The project team were unable to find any reports impacts on consumer health caused by helium balloons.

Comparative impact of fireworks

The dangers of fireworks are well-recognised and have been extensively reported in the media and a variety of journals over many years. Appendix 5.6 includes a small number of references on the subject. Anecdotal evidence presented by BBC News in 2000 suggested that almost 830 people in Britain were treated for firework injuries in 1998. In 2005, a report by the Royal Society for the Prevention of Accidents stated that some 990 injuries were attributable to fireworks.

Over time, successive governments have introduced legislation⁴ in an effort to reduce the risks to consumer safety and to property posed by the use of fireworks, for example:

- The Firework Regulations 2004
- Manufacture and Storage of Explosives Regulations 2005
- The Pyrotechnic Articles (Safety) Regulations 2010

Whilst there is clear justification for legislative intervention in the case of firework use, by contrast, the evidence suggests that the risks to consumer health from the use of sky lanterns (and helium balloons) are so small as to make a similar approach inappropriate and unnecessary.

3.7 Helium resources

Helium is a finite resource which is used in a variety of medical, scientific and industrial applications. One of the main medical applications is in MRI scanners, although the largest consumer of helium is reported to be NASA who use it in 'huge quantities to purge potentially explosive fuel from its rockets'⁵.

There are an increasing number of reports in the media that warn of the depletion of helium reserves and the risks that this will pose to its future use in MRI scanners (for example). In addition, the use of this valuable finite resource in toy and party balloons has been widely questioned. It has been reported that the use of helium resources for filling party balloons constituted up to 10% of global helium consumption in 2009 (Wothers, Royal Institute Christmas lectures, 2012). There have been calls for party balloons to use hydrogen, rather than helium; whilst hydrogen is cheaper and more buoyant, helium is preferred because it is non-flammable and therefore safer.

In response to these concerns, the balloon industry has recently insisted that the helium used in party or toy balloons is recycled gas previously used in the medical industry and subsequently mixed with air. For this reason, the industry describes the material as 'balloon gas' rather than helium.

⁴ Further information is available at <https://www.gov.uk/fireworks-the-law>:

⁵The Independent, August 2010: <http://www.independent.co.uk/news/science/why-the-world-is-running-out-of-helium-2059357.html>

The project team has not been able to obtain a total figure for the use of 'balloon gas' by the UK industry, to compare with helium use in other applications. It has not been possible therefore to make an informed assessment of the impact on helium stocks from its current use in toy and party balloons. However, widely reported increases in the market price of helium, coupled with forecast reductions in availability may have a self-limiting effect on its use in 'non-essential' applications in the future.

4. Sky lantern and helium balloon industry

4.1 Consumer base and structure of the industry

Sky lanterns

Sky lanterns are widely-available via the internet (a simple internet search provided some 1,100 links). Sky lanterns are also supplied through individual retailers, ranging from event and party suppliers to budget 'pound' stores and similar outlets. They tend to be sold in multiple packs, rather than single units. The project team was not able to determine the relative importance of the two main sources of lanterns, although anecdotal information strongly points towards internet suppliers as being the major source.

As part of this study, five specialist sky lantern suppliers were contacted. Of these, three companies provided information to the project team. Two of the companies sold lanterns solely via the internet, the third sold products to stores and wholesalers in addition to website sales. A review of the respective websites of these three businesses revealed that one company sold sky lanterns in addition to other products, whereas the other two traded solely in sky lantern products. The companies described their main customer base as largely being individuals purchasing sky lanterns for particular events.

The sky lantern market is a relatively new one in the UK, and the industry is not currently represented by any particular bodies. Theoretically, sky lantern sellers would be eligible to join organisations such as the Balloon and Party Industry Alliance (BAPIA) and the Balloon Association (NABAS) as they are part of the 'party industry' but evidence suggests that few have done so.

Helium balloons

Helium balloons are used at individual parties and events, for business purposes (e.g. product advertising), and by charities raising awareness or funds.

The UK has an established market for helium balloons and the industry is well represented by member-based associations that respond to issues and lobby on behalf of members. Helium balloons are sold by a range of retailers, from large high street chain stores to individual 'party planners' who provide balloons as part of their overall service. There are a number of other businesses that rely (at least in part) on the helium balloon sector for a portion of their revenue. These include suppliers of helium ('balloon') gas and companies that print designs onto balloons.

4.2 Industry response to addressing safety, environmental and other impacts

Sky lanterns

Findings from this study indicate variable levels of awareness among sky lantern manufacturers and suppliers of the impacts of these products on health and safety and the environment.

The project team are aware of efforts made by some sky lantern suppliers to respond to environmental concerns linked to their products. For example, one of the companies surveyed worked with representatives of the NFU to respond to the impact of lanterns on livestock health. After dialogue, the company removed metal wire from all its lanterns and replaced it with fire retardant string.

The lack of a specific trade association for the sky lantern sector means there is no central and co-ordinating body to represent the interests of suppliers or to co-ordinate the development and implementation of standards of manufacture and consumer guidance across the sector. In practice, this is left to individual companies.

Those who are actively attempting to make their products more environmentally-friendly report frustration that cheaper lanterns (which incorporate metal wire for example) create a poor image for the industry. Lantern sellers on the internet often state that their products are '100% biodegradable', although the exact meaning of this is not precisely defined, and the time taken for them to degrade is not quantified.

Helium balloons

Helium balloon industry responses to environmental issues have been largely undertaken by the representative industry associations, BAPIA and NABAS in the UK and by the European Balloon & Party Council (EBPC) on a European scale. Responses to concerns on animal health and welfare, safety risks and environmental issues appear to have been addressed much more effectively than in the sky lantern sector.

These industry associations have produced codes of conduct, or best practice guides for their members. For example, all members of the EBPC have to comply with European safety measures with regard to:

- Labelling and safety warnings
- The Toy Safety Directive 2009/48/EC
- British Standard for Toy Safety BS EN71, now harmonised within European standards
- EU National regulations and environmental standards⁶

BAPIA also provide comprehensive guidance to members via their code of practice⁷ which covers all aspects of responsible deployment of balloons.

⁶ Taken from 'Report on Helium Balloons in the UK and European Markets, compiled by The European Balloon and Party Council' (2013)

⁷ <http://bapiaonline.com/codeofpractice>

The project team concluded that the helium balloon sector is well-represented by trade associations that demonstrate considered and tangible evidence of the sector's commitment to minimising all forms of risk from the use of toy and party balloons. What was less clear however was how effectively the measures contained in the respective codes of practice are being communicated to the final user.

4.3 Industry regulation of product quality

Whilst no specific product safety standards exist for sky lanterns or helium balloons, European legislation such as the Toy Safety Directive (2009/48/EC) and British Standard for Toy Safety EN71 provides overarching safety requirements and the guiding principles can be applied. Sky lanterns and helium balloons must also comply with the General Product Safety Regulations 2005. This means that they must be 'safe' when used 'normally'. A meeting of the European Commission Consumer Safety Network (2011) concluded that there was little support from major stakeholders in Germany, UK, France, Austria or Spain for the development of a European standard for sky lanterns.

To demonstrate compliance with EU toy safety legislation, a CE mark is affixed to a product by a manufacturer, importer or authorised representative. A leading sky lantern retailer in the UK reported to the project team that they had recently held discussions on this issue with their local Trading Standards department. They were advised not to use the CE mark for sky lanterns since they are not considered to be a toy, although they may be tested to a part of the Toy Safety Standards.

Sky Lanterns

Of the three sky lantern retailers interviewed, two indicated a desire to see increased regulation of product quality in order to raise standards, improve safety and eliminate or reduce risks.

Specific design issues that were cited as having scope for improvement include the use of fireproof paper / improved flame resistance and better fuel cells. Whilst improved designs of sky lantern are already widely available that incorporate these features, these have not been universally applied by manufacturers or specified by all UK suppliers. It is difficult to see how consistent standards of construction and consumer guidance will be achieved without concerted and collective efforts by UK suppliers, mediated through a representative trade body.

Helium balloons

Because there are fewer risks associated with helium balloons, issues of product design and quality are generally less relevant than they are with sky lanterns.

The key industry bodies (see Section 3.3) are however consistent in their requirement that all helium balloons intended for release should be manufactured from 100% natural latex since this is claimed to biodegrade more rapidly than non-latex equivalents. The industry bodies are also consistent in their requirement that foil balloons should not be released, because of the long term littering and environmental impacts of the foil material.

4.4 Market size, value and numbers employed

Sky lanterns

The market value of sky lanterns has been estimated from consultations with the three companies that provided information to the study. All evidence suggests that sky lanterns are manufactured overseas (usually the Far East), and then imported to the UK, where they are marketed and distributed.

Of the three companies interviewed, two were able to provide detailed sales figures, both of which suggested a decline in recent years:

- Company 1 has suffered a sustained decline in sales since 2009 (when they started to operate). Their turnover for sky lantern products decreased sharply from £450k in 2009 to £68k in 2012. The company reported a focus on reducing fire and environmental risks and ensuring good quality products;
- Company 2 started operating in 2005 and their sales reached a peak in 2010/11 when some 1.56 million sky lanterns were sold. However, in 2011/12 only 1.25 million were sold, which represents a 20% decrease in numbers sold, equivalent to a fall in sales of about £0.6m, based on an average lantern price of £2 per unit.
- Company 3 started operating in April 2010 and reported that they had seen no changes in sales or consumer behaviour since then.

It was estimated by the businesses interviewed that between three and eight million sky lanterns are sold each year in the UK. It should be noted that these sales estimates are considerably in excess of previous figures reported, for example 200,000 lanterns released per year (RSPCA, 2012).

The retail price of sky lanterns are reported to vary from as little as 50p up to £10 per unit. Average retail price however is reported to be around £2 for a 'good quality' lantern. Based on sales figures reported by the three companies interviewed, this would value the annual turnover of the UK market at between £6 million and £16 million based on an average retail price of £2 per balloon. Whilst these estimates vary substantially, they do at least provide an insight into the annual value of the UK market. To put this turnover into perspective, it would be broadly equivalent to that of a busy petrol station at the lower end (£6m) and to a medium size engineering company at the other (£16m).

There is evidence from sky lantern suppliers that the market, having expanded to a peak in 2009/10, has contracted in subsequent years. Whilst this may be purely coincidental, it mirrors the decline in the number of false call-outs reported by the UK Maritime and Coastguard Agency (see Section 3.5). The reasons for the decline in sales are unclear. Increased consumer awareness of the problems caused by sky lanterns, highlighted in press articles and through campaigns has been cited as a possibility. One sky lantern importing/retailing company specifically mentioned that *"the negative press is having a dramatic effect (decline in sales) on the sky lantern market"*.

Evidence provided to the project team suggested that the companies supplying lanterns tend to be very small in terms of the number of employees. One of the three companies interviewed only employed one person, the second employed five people and the third employed four full time employees, plus some occasional part-time staff. The company with five employees estimated that their market share is around 15% of the industry with annual sales of over one million lanterns. Whilst empirical information on the total numbers employed was not available, it is clear that the sky lantern sector is not a major employer of staff in the UK, accounting for (perhaps) fewer than 100 individuals across the entire sector.

Helium balloons

The market value of helium balloons has been estimated and based on figures and information provided by EBPC (The European Balloon & Party Council), which represents more than 30 key players in the balloon and party industry in Europe.

According to EBPC, the estimated retail size of the balloon and party industry in Europe was £2.5 billion in 2012, with the UK having the largest market share. The estimated UK retail market size was £500 million in 2012. Balloons account for some 60% of this market and helium balloons account for about 30%. The current UK market value for helium balloons is estimated to be £150 million. The EBPC has estimated the number of businesses reliant on the helium balloon market in the UK and this is shown in Table 3.

Table 3 Businesses associated with the helium balloon market in the UK⁸

Type of business	Number of businesses
Balloon manufacturers	8
Gas suppliers	4
Distributors	25
Printers	23
Online	>100
Independent retailers	>3,000
Retailers with multiple stores	>20
Decorators/party planners	900
Ancillary e.g. training, media, accessories	<50
Total	4,130 (approx.)

Source: EPBC

The data presented in the table above are reported by EBPC to be based on industry intelligence and member/customer databases. However there may be some duplication and it is not clear whether the numbers quoted relate to businesses that are *solely* engaged with the balloon industry.

The EBPC has also estimated that the industry employs some 21,750 people as shown in Table 4 below. It was not clear from the information provided whether this relates to full-time equivalent staff or whether it includes all staff, even if only part of their time is directly associated with balloon-related activities.

⁸ 'Report on Helium Balloons in the UK and European Markets, compiled by The European Balloon and Party Council' (2013)

Table 4 Numbers employed within the helium balloon sector in the UK

Type of business	Numbers employed
Balloon manufacturers	300
Gas suppliers	500
Distributors	200
Printers	250
Online	400
Independent retailers	14,000
Retailers with multiple stores	4,000
Decorators/party planners	2,000
Ancillary e.g. training, media, accessories	100
Total	21,750

Source EBPC

The EBPC estimated that four groups of retailers could be affected by any future changes in the sector:

- Independent party stores: This is the largest group of retailers of helium balloons and there are over 3,000 such stores in the UK. It is estimated by EBPC that a typical store employs about four people. Balloons, nearly all of which are inflated with helium, account for 30-60% of their business. It is reported that very few of these stores would be able to survive without sales of helium balloons (based on personal communications with EBPC).
- Independent card stores: This is the second largest group of retailers and there are around 1,000 of these stores in the UK. Many have turned to balloons in response to an increasingly competitive market for greeting cards. Balloons typically account for 10-25% of turnover and are described by EBPC to be their fastest growing product line. Filling helium balloons is labour-intensive and some of the larger businesses in this group employ additional staff at busy times for this purpose.
- Multiple retail groups: These stores are reported by EBPC to sell high volumes of helium filled balloons. The labour-intensive nature of filling balloons suggests that some jobs would be vulnerable if this service was not provided.
- Events and party planners: These are usually small family businesses that are mainly home-based. They supply balloons for corporate events, the hospitality market and private functions - most notably weddings. There are around 2,000 active businesses in the UK. Without helium balloon sales, the EBPC view is that many of these businesses would not be able to adapt or to diversify into different products or services and would not therefore be able to survive.

Should a ban on helium balloons be imposed (as has been proposed by some lobby groups) there would inevitably be a loss of revenue to the Exchequer. The EBPC has estimated that over £1.5 million of corporation tax per year would be lost from the manufacturing and gas companies alone, together with over £25 million of VAT.

Much of the evidence provided to the project team in relation to industry value, staff numbers and impacts of possible future controls on helium balloons has been provided by the EBPC. As a lobby group representing the balloon industry, the project team recognise that they inevitably have a vested interest in protecting the interests of their members. That said, the evidence provided was deemed to be relevant and largely empirical and demonstrated that the sector makes an important contribution to the UK economy and employs (either fully or in part) a significant number of staff.

5. Control measures for sky lanterns and helium balloons in England and Wales and in other EU Member States

Various measures have been taken at local, national and international level to control the release of sky lanterns and helium balloons and/or to reduce the risk of negative impacts associated with their release. In England and Wales, any controls are currently voluntary as existing legislation does not prohibit the deployment of sky lanterns or helium balloons. CAA guidance provides details of minimum distances from airfields that should be met when launching sky lanterns and helium balloons. Whilst these are not statutory requirements they are underpinned by the Air Navigation Order 2009 (paragraph 137) that covers 'endangering the safety of an aircraft'.

Much of the existing relevant guidance from the CAA (for example) has been incorporated to a greater or lesser extent into consumer advice provided with lanterns and helium balloons.

Elsewhere across the EU, a number of countries have introduced legislative controls on the deployment of sky lanterns and helium balloons.

5.1 Local initiatives

Across England and Wales, 17⁹ local authorities (15 in England; 2 in Wales) have applied a voluntary ban on the release of helium balloons from council-owned land. In many cases, this voluntary ban also includes sky lanterns. These controls are only active on council-owned land (i.e. recreation grounds and parks) and they are described by councils as being purely voluntary bans – they are not able to take legal action against infringements. Under current legislation set out in the Clean Neighbourhoods and Environment Act (2005) or the Environmental Protection Act (1990), waste from balloons or sky lanterns is not classified as litter and as such, no specific legal action can be taken against releases.

Based on discussions with a number of local authorities that have already instigated a ban, it seems that this action has been most successful in preventing mass releases of balloons. The evidence suggests that where local authority bans are in place, they have served to raise public awareness of the risks associated with the release of both sky lanterns and helium balloons as well as targeting specific stakeholders likely to be involved in the mass release of balloons or lanterns as part of specific events. These typically include charity fundraising groups, community groups and businesses promoting sales or products.

Making consumers aware of the risks associated with sky lanterns and helium balloons appears to be the key to achieving a more responsible approach to their deployment and from the evidence available to the project team, this seems to have been one of the main benefits of individual local authority action to date. Whilst acknowledging the positive outcomes of these existing initiatives, the potential weaknesses are that they are purely local, they rely on co-operation from the public and professional operators and appear to focus largely on mass-release of helium balloons. Potential ways of extending the benefits of current initiatives are as follows:

⁹ District Councils in England (6) – Braintree, Maldon, Rochford, South Hams, Thanet, Windsor & Maidenhead
City and Borough Councils in England (10) – Carlisle, Ipswich, Lancaster, Oxford, Plymouth, Redbridge, Reigate & Banstead, Swindon, Tonbridge & Malling, Wandsworth
County Councils in England (1) – Worcestershire
Welsh local authorities (2) – Cardiff City Council, Conwy Council

- By encouraging all local authorities in England and Wales to review their policies on the use of sky lanterns and helium balloons against nationally-agreed objectives, in consultation with relevant stakeholders (e.g. CAA, MCA and the industry). It is suggested that these should be *risk-based* reviews rather than (for example) blanket bans on the release of sky lanterns or helium balloons. It is accepted that as there is currently no representative body, methods of engagement with the sky lantern industry will not be straightforward.
- After individual risk-based assessments, encouraging all local authorities to publish clear guidelines for the deployment of sky lanterns and helium balloon, backed-up with local campaigns to create publicity.

5.2 National initiatives

5.2.1 No release campaigns

A number of bodies have instigated campaigns to discourage organisations, professional operators and members of the public from releasing balloons and sky lanterns. The most notable of these is the Marine Conservation Society's (MCS) 'Don't Let Go' campaign, which has targeted businesses, local authorities and members of the public.

MCS has been pro-active in contacting organisations in order to change their policies on balloon releases. In some cases, large organisations such as banks, food retailers and others have agreed not to release balloons as part of marketing activities. Additionally a number of charities have also committed to not releasing balloons as part of their campaigns. The MCS booklet http://www.mcsuk.org/downloads/pollution/dlg/Dont_Let_Go_Booklet.pdf contains information on the 'Don't Let Go' campaign, on alternatives to balloon releases and details on how to prevent local releases.

Evidence from this study suggests that local and national campaigns have had an impact, either in discouraging the release of sky lanterns or helium balloons or at least raising awareness of issues for consumers to take into account when purchasing them.

Although much of the evidence is anecdotal, the project team have identified a number of possible links between publicity e.g. from national campaigns and individual local authority initiatives and reported trends in design, use and incidents. In summary:-

- Two out of the three of the sky lantern companies interviewed reported a decline in sales in recent years (see section 4.4);
- Two out of the three sky lantern companies interviewed have taken measures to respond to negative publicity and the negative image of sky lanterns, by improving the design, material and quality of their products and providing instructions for reducing risks (see section 4.2);
- Sky lantern industry representatives report that consumers are increasingly enquiring whether products are wire-free and whether they are safe – in general, customers are asking more questions before they decide to purchase;
- Evidence provided by the UK Maritime and Coastguard Agency suggests that the number of sky lantern incidents has fallen sharply since 2010 (section 3.5);
- The MCS 'Beachwatch' survey indicates that the level of littering by balloons is now lower than it was in 2007 (section 3.3).

5.2.2 Measures taken in other EU countries on sky lanterns

The potential risks associated with the use of sky lanterns in other Member States are largely the same as those cited in England and Wales, although greater emphasis is generally placed on fire risk. The precise policies adopted differ between countries, with decisions largely being based on 'perceived' risks. However some countries including Malta, the Netherlands and Spain have carried out risk assessments using the RAPEX assessment model¹⁰:

EU Member States that have banned or put restrictions on the sales and/or the use of sky lanterns include Austria, Malta, Germany and Spain. Others (including Denmark, the Netherlands and Finland) have engaged with sky lantern importers or have implemented other voluntary measures. Following requests from the project team for information from these countries, responses have been received from Austria, Malta, Germany, Spain and Finland. Findings have been incorporated into evidence tables in Appendix 6.

In the Netherlands, sky lanterns were banned from sale in 2008. However following design improvements specified by importers in 2010 (e.g. removal of wire, use of flame-retardant paper, etc.) and improved consumer guidance, the risks were deemed to be lower. Accordingly, the Dutch authorities allowed sales to recommence from the end of 2010. Whilst this is a good example of an industry working in partnership with government to address a specific issue, the evidence suggests that it did require a blanket ban to 'force' the industry into action. Clearly, a better way forward would be to elicit action without the need to introduce national legislation.

Sky lanterns have also been voluntarily withdrawn from the market in Finland in 2009. This action was based on the grounds of consumer safety concerns and fire risks of sky lanterns guided by guidelines of "Safety requirements for candle products and certain products that constitute a fire hazard" and the Consumer Act jointly developed by the Finnish Safety and Chemicals Agency (Tukes) and the Finnish Fire Rescue Authorities.

The approach taken in Malta and Spain has been to introduce a complete ban on the sale and use of sky lanterns in December 2011 (Malta) and in January 2012 (Spain). Whilst this has (presumably) eliminated the risks of sky lantern use discussed in this report, it is unclear what the scale of the industry was before the ban and it is not possible therefore to comment on the impact on the industry in those countries in terms of lost turnover and employment.

Most of the countries (Malta, Austria, Spain and Finland) consulted reported that the measures adopted had been effective, although this was largely based on consultee statements on effectiveness of measures in individual countries. In particular, no consultee provided evidence such as sky lantern sales figures/trends or number of incidences caused by sky lanterns. However, evidence in Austria suggests that where there is a ban on *sales*, but not on the *use* of sky lanterns, some consumers may still buy lanterns from suppliers in other countries.

A summary of the policy actions adopted in selected Member States is set out in Table 5 below.

¹⁰ <http://europa.eu/sanco/rag/public/index.cfm?event=home&CFID=1951289&CFTOKEN=3e3ec6b7f3ed24ba>

Table 5 Summary of actions against sky lanterns taken in other Member States

Option	Basis	Implemented in
National ban on sales and use of sky lanterns	High risks (fire, consumer safety, aviation)	Malta, Spain
National ban on sales	Fire risk, consumer safety	Austria
Regional/local actions	Varies in different regions - fire, consumer safety, aviation	Germany
Voluntary ban	Fire risk (sky lanterns are not widely sold)	Finland
Impose safety requirements (e.g. raised product quality standards; warnings against use during unfavourable weather conditions; change of design, material to reduce the flammability of the lantern body; restrictions on method of use – for example, attaching the lantern to a fixed point with a proper, durable and non-electricity conducting wire)	Lower quality products present higher risks	Netherlands, Denmark

It is difficult to draw any firm conclusions from actions taken in other Member States, in terms of their potential application in England and Wales. This is largely because of the range of different measures taken, geography and climatic differences (e.g. increased fire risk in hot, dry countries such as Spain and Malta) and the relative importance of the sky lantern industry. Imposing a ban in a country with a well-established and 'significant' industry is clearly much more problematic than it would be in a country where the industry is very small or otherwise 'insignificant'.

6. Conclusions

This study was commissioned to identify and assess the risks associated with sky lanterns and helium balloons and to establish an evidence base to help inform future policy decisions. After carrying out a review of relevant literature, structured telephone interviews with a wide range of stakeholders and an analysis of the information gathered, this section sets out the project team's conclusions in relation to the present situation in England and Wales.

6.1 Review of Impacts

6.1.1 Risks to livestock and animal health (including marine animals)

Anecdotal reports and media coverage suggest widespread concern from farming groups and others over the impacts of sky lanterns on the health and welfare of livestock and horses. However, the evidence reviewed by the project team indicates that the number of cases reported each year of animals affected through panic and fright and of ingestion of sky lantern debris is very small. It is recognised that there may be a significant level of under-reporting at present and that the true impacts may be higher. Local factors may be important for some individual businesses, for example if they are close to and downwind of an event location. Such businesses may be more vulnerable but conversely they may have greater awareness of the risks and have mitigating measures in place. On the basis of the evidence presented in this report, while recognising the impact of individual cases it is difficult to conclude that the overall impact of sky lanterns on livestock and animal health is anything other than of minor significance.

The main concern regarding helium balloons is in relation to ingestion by animals. Whilst there may again be a significant level of under-reporting, the current evidence indicates that the impact is very small and confined to only a small number of isolated incidents.

Any harm to marine life often goes unseen, given the inaccessibility of habitats and this is difficult to overcome. However more detailed diagnosis (e.g. through post-mortem examination of animals) and improved recording of land-based incidents in future would enable the extent of the risks to be more accurately quantified.

In addition, it appears that little is known about the flight behaviour of lanterns or balloons. Further controlled tests could be carried out which may in turn influence future product design and provide clearer instructions for users. The benefits of this may help to reduce the risks to livestock and also risks to aviation and to coastal rescue services. It may also reduce the threat of fire (sky lanterns only).

6.1.2 Fire risk (sky lanterns only)

Fire risks from sky lanterns are mainly to agricultural crops, buildings and moorland. Incidents in which sky lanterns were said to be directly implicated in starting fires have been reported to the project team from a variety of sources, including the Chief Fire Officers Association (CFOA). Given that any one of these individual incidents has the potential to cause significant disruption, loss of property and risk to human and animal life, the project team has concluded that fire risk associated with the use of sky lanterns is significant. Further consideration is required regarding potential mitigation options. These should consider both the *use* and the *design* of sky lanterns. Whilst some manufacturers have sought to improve sky lantern design and thus reduce the associated fire risk, others have been less proactive. A significant issue is that there is no single trade body to represent and

co-ordinate the activities of sky lantern suppliers at present and to work with approved testing and inspection bodies to set safety standards.

6.1.3 Impacts on the environment, littering on land and at sea

On the basis of the evidence presented, the project team concluded that the contribution of sky lantern debris to overall environmental littering is small and less significant than potential fire risks and risks to aviation and coastal rescue services. However, the localised effects of littering can be large e.g. in the vicinity of an event location or if large numbers of lanterns are simultaneously released from a single point.

Recent surveys (e.g. from 'Beachwatch') have enabled evidence to be collected in relation to helium balloons and from these the project team has concluded that litter is only of minor significance. Representative bodies are aware of potential litter issues and therefore advocate the use of latex (not foil) balloons for races or mass launches, because these are claimed to biodegrade more rapidly. Speed of degradation of balloon debris is an important factor from the perspective of littering (and also in relation to risks to farm animals, wildlife etc.). The currently-available evidence on the rate of latex degradation is considered inconclusive and clarification would provide useful evidence of the extent to which balloon litter is likely to contribute to the overall environmental impact.

6.1.4 Risks to aviation

The Civil Aviation Authority (CAA) has provided quantifiable evidence to the study in the form of Mandatory Occurrence Reports (MORs). A total of 48 of these were reported to be due to sky lanterns and helium balloons between 2001 and 2012, with sky lanterns accounting for the vast majority (40). Only four of the remaining eight were due to small helium balloons which are the focus of this report.

Sky lanterns pose a safety risk to aviation due to possible ingestion into engines when airborne. Whilst aircraft are on the ground, sky lantern debris can pose a risk to taxiing aircraft and cause delays to take-off and landing. CAA guidelines state that sky lanterns should not be released within 10 nautical miles of an airfield, but it is unlikely that the casual user is aware of this. Furthermore, there is an inconsistency between these guidelines and typical product guidance provided with sky lanterns. These state that CAA permission should be sought if lanterns are to be released within five miles of an airport or landing strip. We conclude that there is a clear need for better consumer information from suppliers that is consistent with CAA guidelines.

The risk to aviation from helium balloons is due to aircraft manoeuvring to avoid them. Mass release of balloons is seen as a potential problem but industry codes of conduct stipulate the need for compliance with CAA guidelines. No information was presented to the project team to suggest that additional control measures are needed.

6.1.5 Risks to coastal rescue services

The project team has concluded on the basis of well-documented evidence received that sky lanterns do pose a significant risk to the proper and effective operation of coastal rescue services. In particular, data from the UK Maritime and Coastguard Agency (MCA) indicates that the number of reported incidents likely to have been caused by sky lanterns increased to a peak in 2010, with reported incidents being lower in subsequent years. The risk is due to sky lanterns being incorrectly identified as distress flares. It is concluded that the most practical mitigation to reduce the risk of false call-outs would be the introduction of a voluntary ban on the sale of red lanterns, which are most commonly mistaken for distress flares.

No evidence has been found of any adverse impacts of helium balloons on coastal rescue services.

6.1.6 Risks to consumer safety

There is very little evidence to link either sky lanterns or helium balloons with risks to consumer safety at present. This is in marked contrast to the well-documented consumer-safety risks associated with fireworks.

6.1.7 Helium resources (helium balloons only)

Public concerns over the possible depletion of helium reserves to inflate balloons are countered by industry insistence that the helium is sourced from recycled gas previously used in the medical industry, subsequently mixed with air. It has not been possible to make an informed assessment of the impact on helium reserves but widely-reported increases in the market price of helium may have a self-limiting effect on non-essential uses, including balloon filling, in the future.

6.2 Sky Lantern and Helium Balloon Industry Representation

The helium balloon sector is well-represented by trade organisations that demonstrate considered and tangible evidence of the sector's commitment to minimising risks. These organisations are consistent in their requirement that all helium balloons intended for release should be manufactured from 100% natural latex. It was less clear as to how effectively the measures contained in the respective codes of practice are being communicated to the final users.

As noted above, the sky lantern sector does not have a dedicated trade body to represent and co-ordinate the activities of suppliers and facilitate sector-wide initiatives. Improved designs are already widely-available but have not been universally adopted by all manufacturers. Specific issues that were cited as having scope for improvement include the replacement of wire, the use of fireproof paper, improved flame-resistance and the re-design of fuel cells.

6.3 Scale, Turnover and Number of Employees

Based on sales figures provided for this study, the annual turnover of the UK sky lantern market is variously valued at between £6 and £16 million per annum, based on an estimated average retail price of £2 per unit. There is evidence that the size of the market has contracted from a peak in 2009/10 and negative press reports may be a factor in this trend. Evidence provided to the project team indicated that the companies supplying sky lanterns tend to be small in terms of the number of their employees. It is concluded that there are probably fewer than 100 individuals directly employed within the sector in the UK.

The retail value of the UK market for helium balloons was estimated to be around £150 million in 2012. Data has been provided on the number of businesses involved and people employed but there may be a degree of duplication and it is not clear that the numbers quoted relate to businesses that are solely engaged with the balloon sector. Nevertheless, this sector is associated with a significant level of economic activity.

APPENDIX 1 Introductory project letter sent by Defra and Welsh Government to stakeholders on 15 January 2013

ADAS study of the environmental and other impacts of the use of sky lanterns and helium balloons

Releasing sky lanterns is increasingly popular at festivals, weddings and other celebrations across the country. But after floating for many miles and falling to earth the burnt-out remnants can injure livestock, create fire risks and litter the areas in which they land.

The Department for Environment, Food and Rural Affairs and the Welsh Government have therefore asked ADAS to carry out an independent study to assess the risks that sky lanterns and helium balloons may pose to livestock, crops and the environment. ADAS's work will help to establish if any further action is needed to address the concerns that people have about them.

The study will begin on 14 January 2013 and aims to investigate:

- the impact sky lanterns and helium balloons are having on the environment, livestock and crops;
- what local authorities in England and Wales and authorities in other EU Member States are doing to address concerns arising from their use; and,
- the value of the market for sky lanterns in England and Wales.

ADAS may contact your organisation to help inform their study. Any input that you are able to provide would be extremely valuable. The project leader is David Moorhouse.

The final project report will be published in March 2013 and will be in the public domain. It will include the names of organisations that have contributed to the study, but it will not provide the names, addresses or contact details of individuals.



APPENDIX 2 Follow up letter sent by Defra and Welsh Government to stakeholders on 4 February 2013



ADAS study of the environmental and other impacts of the use of sky lanterns and helium balloons

The Department for Environment, Food and Rural Affairs and the Welsh Government have commissioned ADAS to carry out an independent study to assess the risks that sky lanterns and helium balloons may pose to livestock, crops and the environment.

An email has already been sent to your organisation on 15th January stating that ADAS may contact you to help inform the study. Any input that you are able to provide would be extremely valuable.

The study aims to investigate:

- The impact sky lanterns and helium balloons are having on the environment, livestock and crops;
- What local authorities in England and Wales and authorities in other EU Member States are doing to address concerns arising from their use; and,
- The value of the market for sky lanterns in England and Wales.

The final project report will be published in March 2013 and will be in the public domain. It will include the names of organisations that have contributed to the study, but it will not provide the names, addresses or contact details of individuals.

Due to the narrow timescale in which to consult all relevant organisations, ADAS are asking those who have a specific interest in this area, and feel they could provide evidence to inform the study, to contact the project team directly to express their interest in being contacted.

If you are interested in being contacted, please respond directly to Steven Tompkins, project consultation lead by ***Monday 11th February.***

Yours Sincerely,

Steven Tompkins (consultation lead)

INTERVIEW GUIDE WITH STAKEHOLDERS



Introduction

Good morning/afternoon. My name is.... calling from ADAS. We are conducting a study on behalf of the Department for Environment, Food and Rural Affairs (Defra) and the Welsh Government (WG) to assess the risks that sky lanterns and helium balloons may pose to livestock, crops and the environment. We are speaking to a wide of range of stakeholders and organisations to develop a dependable evidence base. This study will help to establish if any further action is needed to address any concerns that people might have about them.

Name of interviewer	
Contact details of the interviewee	
Date of interview	

Section 1: General information

1. Name of the interviewee	(Should know beforehand)
Job title/ position	(may also know beforehand)
Organisation	(Should know beforehand)

2. Is your organisation generally negative, neutral or positive about the release of sky lanterns and helium balloons?

	Negative	Neutral	Positive
Sky Lanterns	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Helium Balloons	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

Could you explain why this is and give an OVERVIEW of your organisations position regarding the release of sky lanterns/helium balloons?

--	--

What evidence, if any, does your organisation have to support its position?

Details of evidence (title, date, link, etc.):

--	--

Section 2: Evidence of Risks and Impact

3. From the perspective of your organisation, do you think there are potential risks or negative impacts related to release sky lanterns/helium balloons?

	No Risks or negative impacts	Some risks/negative impacts	Very negative impacts
Sky Lanterns	<input type="checkbox"/> 1 (GO TO Q5)	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Helium Balloons	<input type="checkbox"/> 1 (GO TO Q5)	<input type="checkbox"/> 2	<input type="checkbox"/> 3

4. What do you think the key risks are and have you got any direct evidence, or evidence based on experiences for any of these? *Ask respondent to document the number of incidences, and impact.*

	List Risks/Negative Impacts	Evidence available for no. of incidences	Evidence available for impact
Sky lanterns	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Helium Balloons	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input style="width: 100%;" type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes

Detail evidence (1):

- Incidences relate to: Sky Lanterns Helium Balloons
- Main types of incidences
- Is there any documented evidence of the incidences or impact?
- Do you have any evidence on the cost of these impacts?
- Any more information

--	--

Detail evidence (2):
IF THE INCIDENTS ARE RELATED TO FIRE, ANIMAL HEALTH IMPACTS, OR LITTERING, do you have any evidence on the impacts in comparison with other types of device (e.g. firework) or litter (e.g. plastic bags, metal cans or barbed wire)?

Incidences relate to: Sky Lanterns Helium Balloons

Detail evidence (3):
IF THE INCIDENTS ARE RELATED TO sky lanterns and human accidents, do you have any evidence on the number of incidences in comparison with fireworks over the last couple of years?

Incidences relate to: Sky Lanterns Helium Balloons

5a Are you aware of any activities or actions promoted by the Government, Local Authority, press or media to raise the public profile of the risks presented by uncontrolled use of sky lanterns or helium balloons?

YES

1

NO

2 (GO TO Q6)

Details of actions of mentioned (source)?

5b Do you have any evidence on the impact of these awareness raising activities?

YES

1

NO

2

Details of evidence (source, link, etc.)

6. (ONLY ASK IF IT IS LOCAL AUTHORITY)

Have you got an estimate on the number of mass releases of sky lanterns/helium balloons that have taken place in the past few years in your county?

	Period covered	Please tick if yes	No. of releases	Source of information
Sky lanterns	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Helium Balloons	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>

Details on the basis of estimates:

7a Has your organisation taken any actions to discourage or ban the release of sky lanterns and/or helium balloons or minimising any potential risks?

Type of activities	Please tick all that apply	Specify the action	Start and end date of the action
A formal ban on releasing sky lanterns/helium balloons	<input type="checkbox"/>		
A no-release campaign	<input type="checkbox"/>		
Encouraging people to report a release of sky lantern/ helium balloon	<input type="checkbox"/>		
Promotion of sky lantern/ helium balloon alternatives	<input type="checkbox"/>		
Guidance on the safe use of sky lanterns	<input type="checkbox"/>		
Other	<input type="checkbox"/>		
None	<input type="checkbox"/>	GO TO Q8	
Details of actions:			

7b How effective have these measures/actions been in discouraging the release of sky lanterns and/or helium balloons or minimising their potential negative impacts? Is there any evidence for their effectiveness?

Type of activities	Please tick what was mentioned at 6A	Effectiveness				Evidence available?
		Not effective	Somewhat effective	Very effective	Don't know	
A formal ban on releasing sky lanterns/helium balloons	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
A no-release campaign	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
Encouraging people to report a release of sky lantern/ helium balloon	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
Promotion of sky lantern/helium balloon alternatives	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
Guidance on the safe use of sky lanterns	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
Other	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
Detail evidence:						

Section 3: Any additional evidence/comments

8. Do you have any other comments?

Sky lanterns:

Helium
Balloons:

Section 4: Approval for future contact

9. Are you happy to be contacted again if we need to confirm a few details?

YES

 1

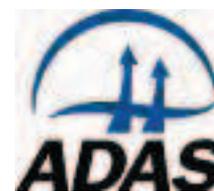
NO

 2

IF YES, are
preferred to be
contacted by
phone or email?
Record details
of email or
phone numbers

APPENDIX 3b Interview Guidance Form for Sky Lantern and Helium Balloon Suppliers and Distributors

INTERVIEW GUIDE WITH SKY LANTERN AND HELIUM BALLOON SUPPLIERS



Introduction

Good morning/afternoon. My name is.... calling from ADAS. We are conducting a study on behalf of the Department for Environment, Food and Rural Affairs (Defra) and the Welsh Government (WG) who are responsible for implementing policy on the environment and animal welfare. The purpose of this study is to establish a dependable evidence base on the use of sky lanterns and helium balloons. As an independent consultancy, we are keen to gather factual evidence from the industry so we can adequately reflect both sides of the debate within the evidence base that we have been asked to establish through this project. It is also important to understand the market value of the industry and how important it is to the UK economy.

Name of interviewer

Date of interview

Section 1: General information

1. Name of the interviewee

(Should know beforehand)

Job title/ position

(may also know beforehand)

Company

(should know beforehand)

2. Could you briefly describe your business? (Product range, and what is your company's role in the supplier chain- importer, distributor, wholesaler, retailer...)

Sky Lanterns

Helium Balloons

3. What are the key types of sky lanterns/ helium balloons that you are supplying? Could you give a brief description of each type?

Number of key types

TYPE 1:

TYPE 2:

TYPE 3:

TYPE 4:

TYPE 5:

Section 2: Industry Response and Impact

4. Are you aware of any recent call for action on sky lanterns and helium balloons?

Sky Lanterns Yes No
Helium Balloons Yes No

IF YES:

4a What actions against sky lanterns and helium balloons are you aware of?

4b What's your company's response to these actions?

4c What are the impacts of these actions to your business? (ASK FOR EVIDENCE)

5a Have there been any changes in sales of sky lanterns or helium balloons in the past 5 years? (BY KEY TYPES OF PRODUCT)-RECORD SALES FIGURES for 2012 and/or percentage changes, compared to 2011 and five years ago.

		2012*	% change compared to 2011		% change compared to 2007	
OR: TYPE	TYPE 1			%		%
	TYPE 2			%		%
	TYPE 3			%		%
	TYPE 4			%		%
	TYPE 5			%		%
	ALL				%	

*: Volume of sales and/ or value.

Description of changes and explain the changes

5b Are there changes in consumer behaviour? (for example, are there more people enquiring about sustainability issues/safety issues etc. before purchasing? Etc.)

6a Are you aware of any potential risks/negative impact that sky lanterns/helium balloons may have to human health and safety, well being of livestock, wildlife, crops and the environment?

Sky Lanterns Yes No
Helium Balloons Yes No

Details of risks mentioned:

6b IF YES, have you taken any actions or make changes to the products to mitigate risks?

Sky Lanterns Yes No
Helium Balloons Yes No

Details of actions /changes:

6c IF ACTIONS TAKEN/CHANGES MADE, how effective are these measures to mitigate those risks? ASK FOR EVIDENCE TOO.

Sky Lanterns Yes No
Helium Balloons Yes No

Details of effectiveness and evidence:

7. Have you got any additional comments regarding sky lanterns and helium balloons?

Section 3: Information about the Company

8a In which year did the company start operating?

Details

8b How many employees do you have?

Details

8c What's the market share of your company in England and Wales?

Details

8d Who are your main customers?

Details

8e Which are the main regions that you are supplying? How many sales outlets do you have in each? And their shares of sales?

Details

8f What's your annual revenue from sales of sky lanterns /helium balloons?

Details

OR Select from the following bands:

- Under 20k
- 20k-50k
- 50k-100k
- 100k-200k
- 200k-500k
- Over 500k

Section 4: Approval for future contact

9 Are you happy to be contacted again if we need to confirm a few details?

YES

NO

12

IF YES, are preferred to be contacted by phone or email?
Record details of email or phone numbers

APPENDIX 4 List of Stakeholders Consulted

Consulted organisations- risk and impacts

Agrical
British Cattle Veterinary Association (BCVA)
British Horse Society (BHS)
British Veterinary Association (BVA)
British Veterinary Zoological Society (BVZS)
Chief Fire Officers Association (CFOA)
Civil Aviation Authority (CAA)
Conwy County Council
Defra Rural Farming Networks (RFN)
Department for Business, Innovation and Skills (BIS)
England & Wales Wildfire Forum (EWWF)
Farmers Union Wales (FUW)
Goat Veterinary Society (GVS)
Heather Trust
Keep Wales Tidy (KWT)
Manchester Airport
Marine Conservation Society (MCS)
Maritime and Coastguard Agency/HM Coastguard
Milton Keynes Council
National Farmers Union (NFU)
NFU Mutual
Staffordshire County Council
Women's Food and Farming Union (WFU)

Consulted organisations- suppliers and industry

The Balloon Association (NABAS)
Balloons and Party Industry Alliance (BAPIA)
European Balloon & Party Council (EBPC)
Individual sky lantern retailers (names withheld for confidentiality)

APPENDIX 5 Literature and Interview Evidence Summary Tables

The search results from the desk review and telephone interviews were summarised in note form, as shown in Appendices 5.1 to 5.7 below. The validity of the data was assessed for:

- **Independence**- the quality of the evidence based on the independence of the author;
- **Reliability**- the quality of the evidence based upon the information behind it, i.e. anecdotal or study based;
- **Robustness**- the quality of the evidence based on whether there are clear causal links with sky lanterns or helium balloons.

A number-based scoring system was used, based on a 1 to 3 scale, whereby 1 was lowest and 3 was highest for that particular criterion. As an example, for **Independence**:

- A score of 1 was given to a source produced by an organisation such as a lobby group, charitable or member - based organisation with specific interests;
- A score of 2 was given to sources published by independent bodies;
- A score of 3 was given to a source produced in a scientific peer-reviewed journal or publication.

The scores for these criteria were not averaged into an overall score for each piece of evidence, as this would potentially be misleading.

A score of 1 was given to all news articles. Although the source reporting the incident may be independent, the actual evidence presented was often quoted without references and it was therefore difficult to determine the true independence of the evidence presented.

APPENDIX 5.1 Risks to animals and marine life

Table 5.1.1 Source summary- risks to animal health and welfare (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
RSPCA (Oct 2005)	RSPCA wildlife factsheet	Helium balloons	Factsheet focusing on the impacts of helium balloons to wildlife, suggested actions to be taken	1	1	2
Chester Chronicle (10 Feb 2010)	Cheshire farmer Huw Rowlands call for Chinese lantern ban after cow death	Sky lanterns	News article looking at the impact of sky lanterns on cattle	1	1	2
BBC news (24 August 2010)	Farmers in Wales start 'lantern patrols'	Sky lanterns	News article describing the potential risks from lanterns	1	1	2
BBC news (13 September 2010)	Chinese lanterns: tranquillity masks a threat	Sky lanterns	News article looking at the impact of sky lanterns on livestock	1	2	2
Welsh Government (1 Dec 2010)	Welsh Chief Vet warns of Chinese lantern danger	Sky lanterns	Article released by Welsh Government looking at the impact of sky lanterns on livestock health	2	2	2
BBC news (23 Feb 2011)	Tiverton farmer put magnets in cows stomachs	Sky lanterns	News article looking at a method to reduce impacts of sky lanterns on livestock	1	1	2
Daily Telegraph (5 May 2011)	Farmer wins compensation after Red Nose Day balloon kills cow	Helium balloons	News article where farmer wins successful insurance claim against school as a result of cattle death from balloon	1	2	3
Farmers Guardian (2 May 2012)	Battle against Chinese lanterns intensifies after cow deaths	Sky lanterns	News article detailing effects of sky lanterns on livestock health	1	1	2
RSPB (25 May 2012)	Celebrate safely this summer for animals' sake	Sky lanterns	Website article looking at effects of sky lanterns on wildlife	1	2	2
Horse and Hound (27 July 2012)	Fresh warnings over danger of Chinese lanterns to horses	Sky lanterns	Website article looking at impacts of sky lanterns on horses	1	2	2

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
BBC news (31 August 2012)	Conwy council's lantern, balloon ban bid to protect wildlife	Helium balloons	News article looking at impacts of balloons on wildlife	1	2	2
RSPCA (Oct 2012)	RSPCA wildlife factsheet	Sky lanterns	Factsheet focusing on the impacts of sky lanterns on wildlife, suggested actions to be taken	1	1	2
The Daily Telegraph (2011)	Farmers call for ban on sky lanterns	Sky lanterns	News article detailing impact of sky lanterns on the environment, livestock and horses	1	1	2

Table 5.1.2 Source summary- risks to animal health and welfare (interviews)

Source			Score		
Reference	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Penrose (2002) Marine Conservation Society referring to 2002 Marine Environmental Monitoring report	Helium balloons	Incident of a dead juvenile green turtle in Blackpool. Turtle died from oesophageal and stomach impaction resulting from ingestion of plastic including a large balloon fragment	3 (survey conducted by professional body)	3 (evidence supported by documented post mortem report)	2 (other plastic debris was consumed by the animal as well as a balloon fragment)
British Horse Society (2013)	Sky lanterns	9 reports from November 2010-Jan 2013 of sky lantern impacts on horse behaviour	3 (evidence provided by members without prompt)	2 (evidence supported by other accounts)	2 (most likely that horses were frightened by sky lanterns but no definitive causal link can be made from evidence)
British Horse Society (2013)	Sky lanterns	Two reports from British Horse Society members posted on www.horseaccidents.org.uk a live forum for recording incidents – describes injuries sustained to horses from sky lanterns	3 (evidence provided by members without prompt)	2 (evidence supported by other accounts)	3 (causal links to sky lanterns)
British Horse Society (2013)	Sky lanterns	Reports from members of the British Horse Society posted on www.horseaccidents.org.uk a live forum for recording incidents - 4 reports of sky lanterns landing in hay fields	3 (evidence provided by members without prompt)	2 (evidence supported by other accounts)	3 (causal links to sky lanterns)
Staffordshire County Council (2013)	Sky lanterns	Anecdotal evidence from a number of farmers regarding health impacts of sky lanterns on livestock - describes livestock death	2 (anecdotal evidence but not substantiated)	2 (evidence of impact, and plausible based on other impacts)	2 (anecdotal evidence of livestock impacts)
Hudson (2010) Staffordshire County Council	Sky lanterns	Report by Staffordshire County Council - Impact of sky lantern on animal health	3 (fact, based on impartial literature review)	3 (evidence supported by references)	2 (presence of links to sky lanterns, but these are not confirmed)

Source			Score		
Reference	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Women's Food & Farming Union (2011)	Sky lanterns	Impact of sky lanterns on livestock health - 10 reports of cattle death and 1 sheep death confirmed by post mortem to be caused by sky lanterns	2 (reported to be based on individual farmer accounts)	2 (evidence said to be confirmed by post mortem or veterinary reports but not verified by project team)	2 (causal links implicated, but not verified by project team)
Farmer/ personal communication (2013)	Sky lanterns/ helium balloons	Anecdotal evidence of sky lanterns and helium balloons found in farmers fields	2 (not necessarily unbiased judgement)	1 (evidence but not supported)	2 (presence of causal links)
NFU Members Report (2013)	Sky lanterns	Anecdotal evidence based on reports posted to NFU regional offices - 18 reports of sky lanterns landing in cropped areas	2 (not necessarily unbiased judgement)	2 (evidence supported by other accounts)	2 (causal links implicated, but not verified by project team)
Goat Veterinary Society (2013), personal communication	Sky lanterns	Anecdotal report of thin wire found at post mortem of a goat - 'probably' due to sky lantern	2 (source is based on 'second hand' information)	2 (evidence allegedly supported by post mortem but not confirmed)	1 (source only documented thin wire being found, not confirmed to be related to a sky lantern)
Goat Veterinary Society (2013), personal communication	Helium balloons	Anecdotal evidence of goat choking on helium balloon	2 (source is based on 'second hand' information)	1 ('second hand' evidence not supported)	2 (source said to be related to helium balloons but not confirmed)

Table 5.1.3 Impact on marine life (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Lucas, Z (1992)	Monitoring persistent litter in the marine environment on Sable Island, Nova Scotia	Plastics mainly	Scientific journal describing impacts of beach litter (abstract only)	3	3	1
Lutacavage ME, Plotkin P, Witherington B, Lutz PL (1997)	Human impacts on sea turtle survival	Plastics mainly	Scientific journal describing impacts on sea turtles	3	3	1
Kent Local Government (2004)	Marine & coastal litter	Plastics mainly	Article released by local government looking at causes, descriptions and impacts of marine littering in UK	2	3	2
WWF (2005)	Marine Health check 2005	Plastics mainly	Yearly review by WWF on marine conservation issues	1	2	2
The Green Blue (2009)	What we know about litter in the marine environment	Plastics mainly	Fact sheet detailing extent of marine litter and tips on reducing it	1	2	2
Hyrenbach, DW, Nevins, H, Hester, M, Keiper, C, Webb, S and Harvey, J (2009)	Seabirds indicate plastic pollution in the marine environment: quantifying spatial patterns and trends in Alaska	Plastics mainly	Non UK scientific paper associated with marine pollution through littering	3	3	1
The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) (2009)	Marine Litter in the North East Atlantic region	Plastics mainly	Scientific paper looking at marine debris and harm to marine life	3	3	1
Ten Brink <i>et al</i> (2009)	Guidelines on the use of market-based instruments to address the problem of marine litter	Plastics mainly	Scientific paper looking at marine debris issues and harm to wildlife	3	2	1
Ribic, CA, Sheavly, SB, Rugg, DJ and Erdmann, ES (2010)	Trends and drivers of marine debris on the Atlantic coast of the US 1997–2007	Plastics mainly	Scientific paper describing patterns of marine debris	3	3	1

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
KIMO International (2010)	Economic Impacts of Marine Litter	Plastics mainly	Document on economic impacts by an environmental organisation.	1	3	1
Vanhooren, S, Maelfait, J and Belphaeme, K (2011)	Moving towards an ecological management of beaches	Plastics mainly	Journal on management of beaches with focus on the damage caused by mechanical beach cleaners and mention of balloons	3	3	3
Cuykens Ann, B, Claessens, M, Maelfait, H, Dewitte, E, Goffin, A, Stienen, EWM and Janssen, CR (2011)	Sea, beach and bird: plastics everywhere	Plastics mainly	Scientific paper (non UK) looking at plastic debris in the Belgian marine environment	3	2	2
Scottish Government, (2012)	Marine litter issues, impacts and actions	Plastics mainly	Website article looking at a wide variety of impacts of marine debris and possible remediation initiatives	2	3	2
Schuyler <i>et al.</i> (2012)	To eat or not to eat? Debris selectivity by marine turtles	Plastics mainly	Scientific paper looking at marine debris and harm to marine life, in particular sea turtles	3	3	3
Lusher, AL, McHugh, M, Thompson, RC (2013)	Occurrence of microplastics in the gastrointestinal tract of pelagic and demersal fish from the English channel	Plastics mainly	UK based study on effects of micro plastic litter on pelagic & demersal fish	3	3	1
EPA - Environmental Protection Agency	National Marine Debris Monitoring Program. Lessons learned	Plastics mainly	Scientific paper (non UK) evaluating marine debris monitoring scheme in US	3	2	2
Marine Conservation Society (MCS) position statement (undated)	MCS Pollution Policy and Position Statement	Plastics mainly	Document detailing MCS position on litter and pollution	1	2	3

APPENDIX 5.2 Fire risk

Table 5.2.1 Source summary- fire risk (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
BBC news (2006)	Cathedral fire alert over lantern	Sky lanterns	News article detailing impact of sky lanterns on property damage	1	2	3
BBC news (2009)	Sky lanterns 'posing fire risk'	Sky lanterns	News article detailing impact of sky lantern fire on risk to human safety/health	1	2	2
BBC news (2010) ^a	Chinese lantern causes crop fire near Woodstock	Sky lanterns	News article detailing impacts of sky lanterns and crop damage due to fire	1	2	3
BBC news (2010) ^b	Leicestershire farmer saves crop from being destroyed by lanterns	Sky lanterns	News article detailing impact of sky lanterns on crop damage	1	2	2
BBC news (2011)	Lantern warning after Holy Island dunes fire	Sky lanterns	News article detailing impact of sky lanterns on fire risk to environment	1	2	2
BBC news (2011)	Michael Eavis calls for UK ban on Chinese lanterns	Sky lanterns	News article detailing impacts of sky lanterns on crop damage and livestock death	1	1	2
Stourbridge News (2011)	Wordsley family has lucky escape after lantern starts car blaze	Sky lanterns	News article detailing impact of sky lanterns on human health	1	2	2
The Daily Telegraph (2011)	Latest fire caused by Chinese sky lanterns increases calls for a ban	Sky lanterns	News article detailing impact of sky lanterns on property damage and human health risk	1	2	2
BBC news (2011)	Chinese lantern blamed for Somerton fire	Sky lanterns	News article detailing impact of sky lanterns on property damage	1	2	2
The Daily Telegraph (2011)	Fire-fighters called 100 times to deal with burning Chinese lanterns	Sky lanterns	News article detailing impact of sky lanterns on fire-fighter call-outs	1	1	2
The Daily Telegraph, (2011)	Fire-fighters call for ban on sky lanterns	Sky lanterns	News article detailing impact of sky lanterns on the environment, livestock and horses	1	1	2
BBC news (2012)	Lantern causes Flintshire conservatory fire	Sky lanterns	News article detailing impact of sky lanterns on property damage	1	2	2
BBC (2012)	Pembroke Dock new year firework sparks blaze in three homes	Firework	News article which describes property fire as a result of fireworks	2	1	2

Table 5.2.2 Source summary- fire risk (interviews)

Source			Score		
Reference	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Women's Food & Farming Union (2013)	Sky lanterns	Reports submitted to WFU (anecdotal evidence). Two incidences of sky lanterns landing in domestic properties. Fire put out, no damage caused	2 (reported to be based on individual accounts)	2 (evidence supported by 1 other account)	2 (presence of causal links but not completely verified)
Women's Food & Farming Union (2013)	Sky lanterns	Reports submitted to WFU (anecdotal evidence backed up by press articles in some cases). Three incidences of sky lanterns landing in fields of straw or crops (barley) and setting them alight, confirmed by fire officer as caused by sky lanterns	2 (reported to be based on individual accounts)	2 (evidence on one case said to be confirmed by insurance claim and fire officers report not seen by project team)	2 (presence of causal links but not completely verified)
NFU (2013)	Sky lanterns	Anecdotal evidence based on reports posted to NFU regional offices of caravan damage due to sky lantern fire	2 (not necessarily unbiased judgement).	2 (evidence supported by other accounts)	2 (presence of causal links but not completely verified)
NFU (2013)	Sky lanterns	Anecdotal evidence based on reports posted to NFU regional offices of lanterns landing alight among hay bales, lanterns extinguished before damage caused	2 (not necessarily unbiased judgement).	2 (evidence supported by other accounts)	2 (presence of causal links but not completely verified)
EWWF (2013), personal communication	Sky lanterns	Anecdotal evidence of wildfire incidents caused by sky lanterns. In all, 8 wildfire incidents in Dorset, and 3 in Northumberland caused by sky lanterns	1 (anecdotal evidence based on personal communications)	1 (evidence not supported)	2 (presence of causal links)
CFOA (2013), personal communication	Sky lanterns	UK survey conducted from 2009 to 2011 for a BBC programme in July 2011. 60 Fire and Rescue Services asked to take part in survey and 42 responded (70% participation)	2 (evidence based on personal communication by independent body)	2 (evidence supported by other accounts)	3 (presence of sky lanterns specifically)

APPENDIX 5.3 Littering on land and at sea

Table 5.3.1 Source summary - littering on land and at sea (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
MCS (2009)	Don't Let Go	Helium balloons	Paper associated with organisation looking at the effects of balloon releases as littering	1	3	3
NABAS, Code of conduct (2009)	NABAS code of conduct for balloon release	Helium balloons	Position paper highlighting guidelines for helium balloon release	1	2	2
Burchette (1989)	Study of the effects of balloons on the environment	Helium balloons	Scientific journal looking at effects of helium balloon releases on littering	1	1	2
Keep Wales Tidy (2008)	Keep Wales Tidy Position Paper	Helium balloons	Position paper detailing impact of balloon releases as litter	2	2	3
The Guardian (2009)	What is the environmental impact of a sky lantern?	Sky lantern	News article detailing environmental impact of sky lanterns	1	2	3
Vanhooren <i>et al</i> (2011)	Moving towards an ecological management of beaches	Helium balloons	Scientific journal looking at cost of beach clean up and litter sources on beaches	3	3	2
Keep Wales Tidy update (2013)	Keep Wales Tidy information on balloons and lanterns	Helium balloons and sky lanterns	Updated position paper looking at balloon releases as a source of littering	2	3	3

Table 5.3.2 Source summary- littering on land and at sea (interviews)

Source			Score		
Reference	Sky lanterns / helium balloons	Description of evidence	Independence	Reliability	Robustness
Marine Conservation Society (2012)	Helium balloons	MCS Beach-watch results confirming balloon litter increase from 3.4 items/km of beach in 1996 to 9.5 items/km of beach in 2011	3 (survey conducted by volunteers, assumed unbiased reporting)	3 (evidence of impact, and plausible based on other impacts)	3 (clear links of balloon litter)
Conwy County Council (2013)	Sky lanterns and helium balloons	Anecdotal evidence from councils cleansing department relating to more balloon and sky lantern debris left in hedges, roadsides etc	2 (anecdotal evidence but not quantified)	2 (evidence of impact, and plausible based on other impacts)	2 (anecdotal evidence of balloon litter)
KWT (2013), personal communication (extracted from survey data)	Helium balloons	Survey data from KWT's Local Environmental Audit and Management System (LEAMS) confirming balloon litter found on 1% of streets surveyed by KWT in the 2010-11 survey year	3 (survey conducted by volunteers), assumed unbiased reporting)	3 (evidence of direct impact)	3 (clear survey methodology to ensure robustness).
WFU (2013)	Sky lanterns	A vegetable for Tesco contacted WFU to say that he routinely spent every Monday morning picking up sky lantern litter from fields	2 (personal communication)	1 (evidence but not supported by anything other than anecdotal 'third party' account)	2 (presence of causal links but no sound basis to estimate impact)

APPENDIX 5.4 Risk to aviation

Table 5.4.1a Source summary- risks to aviation (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
CAA (2011)	Operation of directed light, fireworks, toy balloons and sky lanterns within UK airspace	Sky lanterns, helium balloons, also fireworks	Article released by UK organisation focusing on the impacts of fireworks, laser light, sky lantern and helium balloons on aviation.	2	2	3
BBC news (2011)	Sky lantern warning issued by Manchester Airport	Sky lanterns	BBC news article that focuses on impacts of sky lanterns on aviation safety	1	2	3

Table 5.4.2 Source summary- risks to aviation (interviews)

Source			Score		
Reference	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Manchester Airport (2013), personal communication	Sky lanterns	A mandatory occurrence report (MOR) ¹¹ filed by Manchester Airport. An outbound passenger plane reported a sky lantern on the runway of Manchester airport which delayed an outbound departure, no inbound traffic affected	3 (fact, reported as an official incident by aircraft)	3 (confirmed evidence as sky lantern on runway)	3 (clear causal link)

¹¹ The objective of the MOR Scheme is to contribute to the improvement of flight safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. This is administered by the Civil Aviation Authority (CAA).

APPENDIX 5.5 Risk to coastal rescue services

Table 5.5.1 Source summary- risks to coastal rescue services (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
RNLI (2010)	Chinese lanterns spark search for red flares off Skegness	Sky lantern	RNLI article detailing sky lanterns and coastguard call-outs	2	2	3
RNLI (2011)	Sunderland RNLI Lifeboat launches after flares sighted off Hendon	Sky lantern	RNLI article detailing effects of sky lanterns and coastguard call-outs	2	2	3
HSE (2012)	Working together on firework displays	Sky lantern	Health and safety document detailing regulations and guidance around firework displays	2	3	3
RNLI (2012)	Newquay RNLI chief in new plea over lights in the night sky	Sky lantern	RNLI article detailing effects of sky lanterns and coastguard call outs	2	2	3
BBC news (2008)	Paper lantern sparks major search	Sky lantern	BBC news article detailing effects of sky lanterns and coastguard call-outs	1	2	3
BBC news (2010)	Chinese lantern 'sparks sea search' in Sussex	Sky lantern	News article reporting on false coastguard call out due to sky lantern	1	2	3
Maritime and Coastguard Agency (2009)	Public urged to inform coastguard when using Chinese lanterns	Sky lantern	Article released looking at impacts of sky lanterns and coastguard call-outs	2	2	2
Farming UK (2010)	Chinese Lanterns: think twice says the NFU	Sky lanterns	Website article looking at impacts of sky lanterns on livestock and coastal risk	1	2	2

Table 5.5.2 Source summary- risks to coastal rescue services (interview)

Source			Score		
Reference	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
Maritime & Coastguard Agency (2013) , personal communication	Sky lanterns	Documented false call outs due to red sky lanterns mistaken as red flares. Number of incidents reported as; 2007 - 7 2008 - 49 2009 - 347 2010 - 754 2011 – 315 2012 – 207	3 (fact, source based on held records)	3 (evidence supported by held data)	2 (presence of causal links but it is impossible to say that all of these events were definitely related to sky lanterns)

APPENDIX 5.6 Risk to human safety

Table 5.6.1 Source summary- human health risk (literature)

Source				Score		
Reference	Title	Sky lanterns/ helium balloons	Description of evidence	Independence	Reliability	Robustness
BBC (2010)	Warning as child burnt by Chinese lantern in Wrexham	Sky lantern	News article looking at sky lanterns and human safety	1	2	2
BBC (2000)	Youth killed by fireworks	Firework	News article which describes human death as a result of fireworks	1	1	2
MSN news article (2011)	Baby burned in firework accident	Firework	News article which describes human injury as a result of fireworks	1	1	2
BBC (2011)	Fireworks blast into Blandford festival crowd	Firework	News article which describes human injury as a result of fireworks	1	1	2
BBC (2012)	Lewes bonfire celebrations: scores treated by medics	Firework	News article which describes human injury as a result of fireworks	1	2	2
Elmbridge Borough Council Website	How many people are injured by fireworks each year?	Firework	Information page discussing human injury as a result of fireworks	2	3	3
Royal Society for the Prevention of Accidents	Firework injuries in Great Britain 2005	Firework	News article which describes human injury as a result of fireworks	2	2	2

APPENDIX 5.7 Risk to helium resources

Table 5.7.1 Helium as a resource (literature)

Source			Score		
Reference	Title	Description of evidence	Independence	Reliability	Robustness
The Guardian, Science (2012)	Helium stocks run low – and party balloons are to blame	News article which focuses on value of helium as a resource	1	2	2
The Independent (August 2010)	Why the world is running out of helium	News article focused on US selling off stocks of the world's largest helium reserves by 2015	1	2	2
The Daily Mail on line (August 2010)	Scientists say earth's helium reserves 'will run out within 25 years' (and party balloons should cost £65 each)	News article focused on depletion of helium reserves and belief of some scientists that such a scarce resource is being squandered on non-essential uses	1	1	2
The Royal Institution of Great Britain (Dec 2012)	Chemist calls for ban on helium balloons this Christmas	Website article publicising Christmas lectures by Dr Peter Wothes and expressing concern over scarcity of helium reserves. It goes on to describe use of helium for party balloons taking up 10% of global supplies (2009 data)	2	2	2
Daily Telegraph (Sept 2012)	The end of the party: don't use helium balloons, demands academic, as gas shortage threatens medical equipment	News article confirming that 75% of helium reserves are produced in US as a by-product of the oil refining industry	1	2	2
New Scientist (Aug 2010)	We are running out of helium	Journal article warning of depleted helium reserves and need to avoid non essential uses e.g. party balloons	2	2	2

APPENDIX 6 Member State Information

Table 6.1 Member State tabular information

Member State	Action taken	Incidents	Legislation	Comments
Austria	Sales ban	<p>Several minor incidents</p> <p>-One major incident (fire was set most probably by a sky lantern on the waste paper storage of a paper mill – some hundred tons of waste paper were burned)</p> <p>-Generic risk assessment (it is not acceptable to let a flame float uncontrolled over two or three kilometres etc.)</p> <p>-Concerns by the air control authorities</p> <p>-Concerns by farmers because of the wires (threat to cattle)</p>	Regulation based on Austrian product Safety Act	<p>Private purchases from distance-sellers in other EU-members states are not covered by the regulation.</p> <p>New type of "tied" lantern – diverging risk assessments between Austria and Germany</p> <p>The sales ban seems to be quite effective: before the ban, a lot of sky lanterns can be seen at New Years Eve, now very few can be seen.</p> <p>The existing fire regulations in Austria require careful handling of open fire – therefore, the use of sky lanterns could be illegal even without the sales ban.</p>
Denmark	Import and use of sky lanterns is not prohibited in Denmark by national regulation but if enquiries received, the Danish Safety Technology Authority informs that sky lanterns are not considered safe and may not be placed on the market.	No reports on incidents or accidents although Danish Coast Guard receives a number of false alarms each year.	<p>There is a Danish regulation on the use of open fires.</p> <p>Import and use of sky lanterns is regulated by the Danish Product Safety Act that transposes the General Product Safety Directive.</p>	<p>Attaching the lantern to a fixed point with a proper, durable and non-electricity conducting wire could eliminate or minimize the inherent risks of the product to an acceptable limit.</p> <p>If the product can be made safe and this can be documented, the Danish Safety technology Authority would accept the product.</p>
Finland	In 2009, the Finnish importer withdrew voluntarily products from the market and recalled from consumers.	The Finnish Safety and Chemicals Agency (Tukes) has received no information of serious incidents caused by these lanterns simply because sky lanterns have not been widely sold in Finland, whereas Tukes has been informed of accidents occurred elsewhere in EU, in such countries where it has been possible to sell sky lanterns.	There are many uncontrollable risks involved in the use of lanterns that are freely airborne ("sky lanterns" or "flying lanterns") and these products are considered to pose a serious risk of fire. Freely airborne lanterns pose a serious risk because it is difficult, if not impossible, to make sure they will not get in contact with combustible materials. Because of their lightness, airborne lanterns may be	This action was based on guidelines concerning sales of sky lanterns in Finland. These guidelines are presented in "Safety requirements for candle products and certain products that constitute a fire hazard" published by Tukes. These guidelines were prepared together with the Finnish Fire Rescue Authorities. The main feature is, that these lanterns pose a serious risk for fire and such a way lanterns are regarded as dangerous products in the

Member State	Action taken	Incidents	Legislation	Comments
			transported by wind or air currents to buildings, trees, etc. Such airborne lanterns with a naked flame are regarded as dangerous in the manner referred to in section 10 of the Consumer Safety Act (section 6 of Act 75/2004). Dangerous airborne lanterns may not be placed on the market.	manner referred in the Consumer Safety Act (Section 3 of Act 920/2011). Finnish authorities consider there are many uncontrolled risks related to the use of sky lanterns and they pose a risk to the safety and health of consumers Tukes has considered sky lanterns, found from Finnish market, as dangerous consumer products and these products are withdrawn, when it has found out that these items are being sold in stores or in the internet in Finland.
Germany ¹²	Since 2010, in all German Länder legislation came in force prohibiting the use of sky lanterns. However, the placing on the market of sky lanterns is not prohibited.	In June 2009 there was a death in connection with a sky lantern in flames.	The regulations are issued primarily on the basis of legislation on public order and safety, fire protection rules, and in some cases on the basis of the Aviation Law.	
Malta	The sales and use of sky lanterns has been banned by the Malta Standards Authority (Source: press release on Dec. 17 2009), followed by a risk assessment using the RAPEX assessment model	A risk assessment carried out on the use of sky lanterns in Malta gave a serious risk profile. Hence these products were banned from sale and use in and around Malta. Relevant aspects for having such a risk profile are the size of the Maltese islands and hence the affect such products can have on planes landing in or taking off from Malta. Moreover, the dry weather prevalent in Malta can easily cause fields and wooden fittings on buildings to catch fire. Malta being so densely populated, the probability of a lighted lantern falling onto residential areas is considered high. As yet, no accidents have been known to occur due to Chinese lanterns in Malta.	No. 634 Product Safety Act (Cap . 427) Use of Sky Lanterns Banned The Malta Competition and Consumer Affairs Authority is hereby banning with immediate effect the use of Sky Lanterns, sometimes also referred to as Chinese Lanterns or Wish Lanterns. These products have been deemed unsafe and pose a serious risk to consumers.	Sky lanterns were deemed unsafe and posed a serious risk to consumers Once inflated, the lanterns are released into the atmosphere where they float haphazardly out of control of the human user. Such mode of operation may cause the lantern to glide onto flammable or highly combustible materials such as houses, fields and cars, thus posing an obvious risk to third party individuals and property. These products have also caused problems related to false alarms for coastguards. Incidences of fire caused by sky lanterns in other EU countries.

¹² Disparity in information, our consultation with Germany suggested that there was not a national policy in restricting the use of sky lanterns although it is illegal to launch a sky lantern in most parts of Germany.

Member State	Action taken	Incidents	Legislation	Comments
Netherlands	Meetings with importers, research and risk assessments carried out by NL authorities using RAPEX assessment model as provided in the RAPEX guidelines.		Commodities Law General Product Safety (consumer safety and safety of goods) Regulation kites and small unmanned balloons (flight safety)	Sky lantern on the market since 2007. Risk assessment concludes that current Sky Lantern does not comply with article 3 of the GPSD; it poses a medium risk; changes to the product might lead to a low risk product. Following innovation by importers in 2010, a new design of lantern has been on the market since the end of 2010 which takes into account certain safety requirements and other aspects to reduce risks. These include warnings against use during unfavourable weather conditions and a reduction in the flammability of the lantern.
Spain	Ban on a brand of British made flying lanterns from the market due to their fire hazard. (Source: NFU online, 12 January 2012 ¹). Sky Lanterns originating in the UK have been withdrawn from the market by the authorities due to the product posing a risk of burns and injuries. After launching, the lanterns fly in the air without control rendering it difficult or impossible to avoid the lanterns coming into contact with flammable material. (Source; RQA Group-product recall case studies ²)		Market surveillance authorities decided in 2007 that the product can create risks for the consumer. Spain considers that the Commission should apply Art. 13 of the GPSD	The Spanish authorities claimed that flying lanterns posed a risk of burns and fire because, after launching, they fly through the air without control. (Source: Farmers Guardian, 11 January 2012 ³ .) The Spanish authorities said the lanterns fly in the air without control making it impossible to avoid the lanterns coming into contact with flammable material such as dry vegetation or buildings. (Source: NFU online, 12 January 2012 ⁴ .)
¹ - http://www.nfuonline.com/Our-work/Campaigns-and-Lobbying/Brussels/Spanish-ban-hazardous-%E2%80%98flying-lantern%E2%80%99/ ; ² - http://www.rqa-group.com/product-recall-case-studies.php?page_number=6&type=1 ; ³ - http://www.farmersguardian.com/home/latest-news/spain-bans-sky-lanterns/44056.article ; ⁴ - http://www.nfuonline.com/Our-work/Campaigns-and-Lobbying/Brussels/Spanish-ban-hazardous-%E2%80%98flying-lantern%E2%80%99/ ;				

Source: Compiled and developed by the ADAS research team based on consultations with EU countries, published sources and the information on the position of Member States provided by contact at Electronic, Materials, Chemicals and Product Regulations in BIS.

APPENDIX 7a Sky Lantern Release Product Safety Guidelines



Release Instructions

- ★ A minimum of two Adults are required to light a lantern.
- ★ Take out the folder sky lanterns carefully from the plastic wrapping, being very careful not to tear or rip the delicate paper.
- ★ Before lighting the lantern, hold it by the bamboo rim and gently fill the lantern with air to expand it fully and remove the creases in the tissue paper.
- ★ To light the lantern, hold it by the top and the bamboo rim whilst another person lights the wick by holding a naked flame against it for a few seconds.

**TAKE CARE - BEFORE THE LANTERN IS LAUNCHED
THE NAKED FLAME MUST BE SUPERVISED AT ALL TIMES**

- ★ The lantern will fill with hot air from the lit touch paper and be ready to be released within approximately 30 seconds.
- ★ Hold the lantern by the bamboo rim until the lantern is full of hot air and is ready to float gently into the sky. Do not release it prematurely as the lantern will fall to the ground.





Safety Instructions

- ★ Familiarise yourself with the lanterns before lighting and launching them. Please refer to the release instructions for more information.
- ★ Do not launch in wind conditions that make lighting the lantern difficult. In any case ensure that the wind is not stronger than 5mph (please refer to a weather forecast for approximate wind speeds in your area such as www.bbc.co.uk/weather).
- ★ Before the lantern is launched, the naked flame must be supervised at all times.
- ★ Launching a lantern in strong winds, that is torn or has burn holes in may cause premature landing and fire at the point of grounding.
- ★ Check the wind direction prior to releasing the lanterns – obstacles such as buildings and trees should not be in the direct flightpath of the lantern and must be at least 30 metres away.
- ★ Prior to use, all lanterns should be kept in a dry, secure place a way from children. Ensure that all children are kept under supervision and away from the source of ignition during the release.
- ★ Always ensure that any naked flames are supervised and never left unattended. Make sure you have water and/or fire extinguishers at hand.
- ★ Do not light and release the lanterns wearing flammable clothing in case the flame from the wick ignites the clothing. For additional safety, protective gloves can be worn.
- ★ Launching sky lanterns in an appropriate surroundings or weather conditions or after they have been damaged may cause fires. It could make you liable to criminal charges or civil claims for damages.
- ★ Releasing large numbers of lanterns, or within a five mile radius of an airport or landing strip? Please contact the Civil Aviation Authority to check air space safety in your area.
Airspace Utilisation Section, Directorate of Airspace Policy
702 CAA House, 45-59 Kingsway, London, WC2B 6TE
Tel: 0207 453 6599 - Fax: 0207 453 6593
Email: ausops@caa.co.uk
- ★ Sky Lanterns must not be released within two miles of a major road or motorway.
- ★ Sky Lanterns must not be released within a 5 mile radius of Farmers Fields and Live Stock.
- ★ If you are planning to release the lanterns within five miles of the coast please notify the Maritime and Coastguard Agency to avoid the lanterns being recognised as distress signals.
<http://www.mcga.gov.uk/e4/mca/mcga07-home/about-us/contact07.htm>

IMPORTANT: 'Party Delights' and manufacturer 'Light a Lantern' take no responsibility for personal injuries, damage or legal issues resulting from the release of these sky lanterns.

Enjoy yourself and be safe!

APPENDIX 7b Guidelines and Code of Conduct for Balloon Releases (NABAS)



Guidelines and Code of Conduct for Balloon Releases

The Guidelines and Code of Conduct is designed for anyone who is planning a Balloon Release. We believe this should be strictly adhered to in the interest of safeguarding the environment

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CODE OF CONDUCT FOR BALLOON RELEASES

NABAS is very aware of its responsibilities to the environment. This Code of Conduct was produced to formalise the principles for balloon releases, which have long been the standard for the Industry. It is extremely important that everyone adheres to this code in the interest of safeguarding the environment.

1. Only natural latex rubber balloons will be used for Releases.

Latex, being an organic product degrades naturally in the environment. Balloons made of any material other than latex and in particular foil balloons **should not** be used for Releases. It is forbidden to use balloons containing any metallic pigment eg bronze, silver, gold etc.

2. All components used in balloon releases must be biodegradable.

Balloons must be hand tied, plastic valves **should not** be used. Any attached labels must be of paper, preferably recycled.

3. Only helium gas should be used to inflate the balloons.

Helium is an inert lighter-than-air gas. As the balloon rises, the gas expands until eventually the balloon bursts producing small fragments which aid decomposition.

4. No ribbons or strings must be attached to the balloons.

Ribbons and strings represent a potential problem and **must never** be used in balloon releases. Labels should be attached via the hand tied balloon knot.

5. Balloons must always be launched singly.

Single balloons disperse easily and quickly. They **must never** be tied together in bunches for balloon releases.

6. Full approval must be obtained from the relevant authorities.

Releases exceeding 5000 balloons should not take place unless they have been cleared in advance with all relevant air traffic and local authorities. The Authorities must be notified **in writing** at least **28 days prior** to the release.

7. Maximum balloon size.

Balloons larger than 12" cannot be released.

8. All balloons sold near balloon releases must be weighted.

Any balloons sold in the vicinity of a balloon release **must be** sold with a weight attached to ensure they cannot escape. Foil Balloons **must never** be released. Latex balloons with a plastic valve and ribbon must also be weighted.

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GUIDE TO BALLOON RELEASES

This information and the Guidelines and Code of Conduct are provided for people and organisations planning their own balloon release for fund raising or any other purpose. We **strongly recommend** that only a small balloon release should be attempted without professional assistance. Small being defined as anything up to 1000 balloons. This guidance is designed to minimize the risk of any potential danger to animals, sea creatures and the general environment.

What happens when a balloon is released?

A scientific survey carried out in 1989 revealed that on release a balloon will float up to a height of approximately 5 miles and then it becomes brittle and shatters into minuscule pieces falling back to earth at a rate of circa one piece every 5 square miles. Problems can arise when a balloon is not inflated properly or fully or is carrying too much weight and therefore does not reach the height at which shattering occurs. This situation causes a potential danger to wildlife and the environment.

What can I do to reduce this risk?

The Balloon Industry has produced a Code of Conduct, with input from leading environmental organisations; you should follow this advice to the letter.

Conclusion

Balloon releases are fun, spectacular and have a variety of promotional and fundraising objectives. However if best practice is not followed major problems can occur.

If you require any further clarification or need advice please contact NABAS, The Balloon Industry's only independent association on 01989 762 204.

Applying for permission from the Civil Aviation Authority.

It is a requirement that if you are releasing more than 5,000 balloons you must apply in writing for permission to the Civil Aviation Authority (CAA) at least 28 days in advance of the release because balloons can interfere with air traffic. The CAA must also be informed of any balloon releases up to 5,000 balloons if the release is in the vicinity of an airport or airfield.

A form can be obtained by calling either the NABAS office on 01989 762 204 or the Airspace Utilization Section of the CAA on 020 7463 6589.

ADDITIONAL INFORMATION

Our Environment & Latex Balloons

- Q What are balloons made of?**
- A** There are basically two types of balloon - foil balloons and latex balloons. The foil balloons (also referred to as mylar) are a bladder made of mylar that is covered with a layer of aluminium that is 0.015 of an inch thick. Latex balloons are made from the sap of rubber trees - a completely natural substance.
- Q Are latex balloons biodegradable?**
- A** Yes. Latex is the product of rubber tree sap; it breaks down when exposed to the elements of nature.
- Q How long does it take for a balloon to biodegrade?**
- A** Degradation of the first step in the breakdown of a latex balloon and begins within approximately one hour of inflation. Degradation is visible in some types of balloons as a cloudy appearance. This is most evident when the balloon is exposed to direct sunlight, heat or normal outdoor conditions.
- Research was carried out in July 1988 with a variety of balloons under various conditions to accurately gauge the time needed for the latex to degrade. Results from the study indicate that the decomposition time for balloons is about 216 weeks (41 months).
- Q Is it true that balloons have been found ingested by sea animals?**
- A** Some cases have been reported, but balloon fragments are unlikely to cause harm if accidentally ingested. This is because latex and the dyes used in latex colouring are non-toxic. However, problems may occur if a partially inflated balloon is ingested, causing possible blockage of the alimentary tract.

APPENDIX 8 List of References

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Eitem 5.6

P-04-398 Ymgyrch dros gael cofrestr ar gyfer pobl sy'n cam-drin anifeiliaid yng Nghymru

Geiriad y ddeiseb:

Llofnodwch i gefnogi cofrestr ar gyfer pobl sy'n cam-drin anifeiliaid. Dyma gronfa ddata canolog i Gymru a fydd yn cynnwys enw, cyfeiriad a cholffarnau pobl sydd wedi'u cael yn euog o unrhyw fath o gam-drin neu greulondeb yn erbyn anifeiliaid yng Nghymru. Bydd yn ofynnol i fridwyr neu werthwyr anifeiliaid wirio'r gronfa ddata canolog hwn cyn caniatáu i anifail y maent yn berchen arno neu wedi'i fridio fynd i ddarpar berchennog neu gartref newydd; os canfyddir bod anifail gan rywun sydd wedi'i gael yn euog o gam-drin neu greulondeb yn erbyn anifeiliaid, bydd y cyflenwr neu'r bridwr yn atebol a chaiff ei erlyn. Ar hyn o bryd, nid oes cyfraith i atal rhywun sydd wedi'i gael yn euog o greulondeb i anifeiliaid rhag symud ychydig filltiroedd i fyny'r ffordd a chael anifail arall a'i gam-drin ymhellach. Rhaid gweithredu cyfreithiau llymach er mwyn helpu i ddiogelu anifeiliaid. Mae angen dirwyon trymach a dedfrydau hwy o garchar yn ogystal â chofrestr ar gyfer pobl sy'n cam-drin anifeiliaid.

Mae Efrog Newydd a nifer o daleithiau yn yr Unol Daleithiau eisoes wedi cyflwyno'r gyfraith hon; beth sy'n rhwystro Cymru rhag arwain y ffordd yn y Deyrnas Unedig? Rydych wedi clywed am Gyfraith Sarah, a luniwyd i gadw troseddwr rhyw rhag aildroseddu. Nawr rydym yn gobeithio cael cyfraith a grëwyd yn y gobaith o atal pobl sy'n cam-drin anifeiliaid rhag achosi rhagor o greulondeb, neu rhag symud ymlaen at gam-drin pobl. Mae ymchwil wedi dangos bod cydberthynas gref iawn rhwng cam-drin anifeiliaid a cham-drin domestig. Mae nifer o lofruddion yn dechrau drwy arteithio anifeiliaid, felly gallem hefyd ddiogelu bywydau pobl.

Cyflwynwyd y ddeiseb gan: Mari Roberts & Sara Roberts

Ystyriwyd y ddeiseb am y tro cyntaf: 19 Mehefin 2012

Nifer y llofnodion: 69

P-04-439 : Diogelu coed hynafol a choed treftadaeth Cymru ymhellach

Geiriad y ddeiseb:

Rydym o'r farn bod coed hynafol a choed treftadaeth Cymru yn rhan hanfodol ac unigryw o amgylchedd a threftadaeth y genedl.

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i'w diogelu ymhellach, er enghraifft, drwy:

- roi dyletswydd ar yr Un Corff Amgylcheddol newydd i hyrwyddo cadwraeth coed o'r fath drwy roi cyngor a chymorth i'w perchenogion, gan gynnwys cymorth grant lle bo'n angenrheidiol;
- diwygio'r ddeddfwriaeth Gorchymyn Cadw Coed bresennol i'w gwneud yn addas i'r diben wrth ddiogelu coed hynafol a threftadaeth, a hynny yn unol â chynigion Coed Cadw (the Woodland Trust);
- cynnwys cronfa ddata o'r coed a gofnodwyd ac a nodwyd yn ddilys gan y Prosiect Helfa Coed Hynafol fel casgliad o ddata i'w gadw gan unrhyw olynnydd i Gynllun Gofodol Cymru, gan gydnabod y rhain fel 'Coed o Ddiddordeb Arbennig' a rhoi'r wybodaeth hon i awdurdodau cynllunio lleol fel y gellir ei chynnwys yn eu systemau gwybodaeth ddaearyddol, er gwybodaeth.

Prif ddeisebydd: Coed Cadw Cymru

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 4 Rhagfyr 2012

Nifer y llofnodion: 5,320



**Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales**

William Powell AM
Chair,
Petitions Committee,
Cardiff Bay,
Cardiff,
CF99 1NA

Your ref: P-04-439

08 May 2013

Deus William,

Thank you for your letter seeking my views on the petition submitted by Coed Cadw calling for greater protection for ancient, veteran and heritage trees across Wales. The issues raised by Coed Cadw are matters that Natural Resources Wales takes seriously. Natural Resources Wales is committed to the sustainable management, use and enhancement of Wales' trees and woodlands as a key delivery partner of the Welsh Government's Strategy for Woodlands and Trees.

Whilst the legislation regarding Natural Resources Wales' functions did not place additional duties on us in the area of woodland and tree protection, we are working closely with the Welsh Government to explore how this might be best achieved. As the Welsh Government has indicated, there are opportunities in the planned Environment, Heritage and Planning Bills for improvement of tree protection legislation, management and advisory work. We are listening to our many interested stakeholders, including Coed Cadw, and we will continue to work closely with them and others, including teams in Cadw and the newly established forestry policy team in the Welsh Government, to ensure that we effectively contribute our collective expertise to these processes.

As stated in our 2013-2014 Business Plan, Natural Resources Wales will continue to deliver the commitments set out in Forestry Commission Wales' Corporate Plan 2012-2015. This includes action for trees and woodlands in rural and urban settings and working with a broad range of stakeholders and partners. We will continue to encourage public involvement with woodlands for example through recreation, enterprise and the provision of learning opportunities in woodland and about woodland for people of all ages.

As part of the development of our Corporate Plan for the next three years, there will be an opportunity for interested stakeholders to contribute their views on our future priorities, including the management, conservation and protection of trees and woodland.

Yours sincerely,

Emyr

EMYR ROBERTS

Prif Weithredwr, Cyfoeth Naturiol Cymru
Chief Executive, Natural Resources Wales

emyr.roberts@cyfoethnaturiolcymru.gov.uk

Natural Resources Wales,
Ty Cambria, Newport Road, Cardiff CF24 0TP

Cyfoeth Naturiol Cymru
Ty Cambria, Heol Casnewydd, Caerdydd CF24 0TP

Eitem 5.8

P-04-444 : Ymgyrch 'DIG FOR VICTORY'

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i gyflwyno ymgyrch 'Dig for Victory' gyfoes drwy gynghorau lleol.

Gyda phris bwyd yn parhau i godi yn ystod cyfnod o ddirwasgiad, mae angen unwaith eto i ni dyfu ein bwyd ein hunain, fel y gwnaethpwyd yn ystod yr Ail Ryfel Byd, pan gyflwynwyd ymgyrch 'Dig for Victory' i sicrhau bod pawb yn cael bwyd. Os byddai Llywodraeth Cymru yn cyflwyno ymgyrch debyg drwy'r cynghorau lleol, gan roi talebau neu hadau, compost neu hyd yn oed cutiau ieir ac ieir (lle bo hynny'n briodol), byddai pobl yn cael budd ariannol a byddai eu hiechyd hefyd yn elwa. Byddai hefyd yn cwtogi ar y bwyd rydym yn ei fewnforio, gan leihau ein hól troed carbon. Mae gan y rhan fwyaf o bobl ardd, a gall pobl sydd heb ardd dyfu rhai llysiau ar batio neu falconi. Gadewch i ni balu i fuddugoliaeth.

Prif ddeisebydd: Plaid Cymru Aberavon

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 15 Ionawr 2013

Nifer y llofnodion: 13



Eich cyf/Your ref
Ein cyf/Our ref

William Powell
Chair of Petitions Committee

committeebusiness@Wales.gsi.gov.uk

Daw Bill,

15 May 2013

Petition from Plaid Cymru, Aberavon

Thank you for your letter of 23 January asking for my views on the petition your Committee received from Plaid Cymru Aberavon, requesting the National Assembly for Wales to urge the Welsh Government to introduce via local Councils a modern day Dig for Victory campaign.

Through the Rural Development Plan (RDP), we are supporting a number of projects aimed at supporting communities and other groups to develop skills in capacity building and the management of groups of volunteers as well as part of the Community Grown Food initiative.

In addition, the Community Land Advisory Service in Wales (CLAS) has secured funding from the Big Lottery's Climate Change Programme, which is managed by the Federation of City Farms and Community Gardens. Through this project, community gardens, farms allotments and orchards will directly benefit and more people will be able to eat healthier.

The Welsh Government is committed to delivering opportunities for local communities to develop their own food growing projects; whilst recognising the concept of a modern day Dig for Victory campaign, we are working in partnership across Ministerial portfolios to ensure that we benefit from the positive impacts of growing such as educating people to eat a healthier diet whilst reducing food miles.

*Best wishes
Alun*

Alun Davies AC / AM
Y Gweinidog Cyfoeth Naturiol a Bwyd
Minister for Natural Resources and Food

Our Ref/Ein Cyf:
Your Ref/Eich Cyf:
Date/Dyddiad:
Please ask for/Gofynnwch am:
Direct line/Llinell uniongyrchol:
Email/Ebost:

P-04-444
11th March 2013
Tim Peppin
029 20 468669
tim.peppin@wlga.gov.uk



William Powell AM
Chair
Petitions Committee
National Assembly for Wales
Cardiff Bay
Cardiff CF99 1NA

Dear William

P-04-444 Dig for Victory Campaign

Thank-you for your letter of 23rd January to Steve Thomas which he passed to me for a response. Please accept my apologies for the delay in responding.

The concerns about food security expressed in the petition are seen as a serious issue by the WLGA. As part of our Sustainable Development Framework we have been working with local authorities to encourage them to plan ahead for issues likely to become increasingly significant in future years (further information is available on our website – see [Futures Trends : Sustainable Development Framework : Environment and Regeneration : Topics : Welsh Local Government Association](#)). This covers not only food security but also related issues such as energy security and resilience to severe weather events. Active consideration of such long term issues will have to be demonstrated by public bodies once the Sustainable Development Bill passes into legislation.

In 2012 the Wales Rural Observatory produced a report for the Welsh Government examining the emergence of community-based food activities in Wales, and identifying what could be done to promote and encourage further activity within this field. It categorised community grown food into four areas of activity: allotment gardening, community gardens, Community Supported Agriculture schemes (e.g. where members of the community pay farmers or producers a predetermined amount in advance in exchange for a share of the harvest or product) and communal food growing in schools.

The report showed that there is increasing interest and activity in relation to community-based, locally grown food, which is encouraging. Growing concerns over food safety are likely to raise the level of interest still further. A shift towards more local production and

Steve Thomas CBE
Chief Executive
Prif Weithredwr

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Cymdeithas Llywodraeth
Leol Cymru
Tŷ Llywodraeth Leol
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Ffôn: 029 2046 8600
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www.wlga.gov.uk

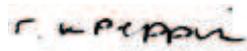
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consumption of food has the potential over time to contribute substantially to a reduction in 'food miles' (and carbon footprint as referred to by the petitioners) compared to the systems operated by the supermarkets. Encouragement of local food production can also help in terms of local job creation and improve physical and mental health. Initiatives such as those proposed by the petitioners therefore need to form part of a wider strategy on community grown food.

Whilst a good deal in this area can be achieved at relatively low cost, if there is to be a concerted drive to promote and support community grown food it will need to be properly resourced. The WLGA would be willing to support any such funded initiative as part of its Sustainable Development Framework with local authorities. However, without additional resources this discretionary area of activity unfortunately would be unlikely to be prioritised in the current financial situation faced by local government.

I trust that this response is of assistance to your committee in its deliberations.

Yours sincerely



Director of Regeneration and Sustainable Development

Eitem 5.9

P-04-403 Achub Plas Cwrt yn Dre/ Hen Senedd-Dy Dolgellau

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i roi cyfarwyddyd i Lywodraeth Cymru i brynu Plas Cwrt yn Dre, a elwir hefyd yn Hen Senedd-dy Owain Glyndŵr, Dolgellau, cyn bo'r trysor cenedlaethol hwn yn cael ei werthu ar y farchnad agored a'i golli am byth.

Gwybodaeth ategol:

Symudwyd Plas Cwrt yn Dre, a elwir hefyd yn Hen Senedd-dy Owain Glyndŵr, o Ddolgellau i Barc Dolerw, y Drenewydd ym 1886. Bellach ni all y Crynwyr, perchnogion yr adeilad ar hyn o bryd, fforddio i'w gynnal a'i gadw ac mae ar werth ganddynt am £55,000. Mae hwn, heb os, yn drysor cenedlaethol a chredwn y dylai Llywodraeth Cymru ei brynu ar gyfer y genedl .

Cyflwynwyd y ddeiseb gan: Sian Ifan

Ystyriwyd y ddeiseb am y tro cyntaf: 2 Gorffennaf 2012

Nifer y llofnodion: 218 (Casglwyd 10 llofnod ychwanegol ar ddeiseb gysylltiol)

John Griffiths AC /AM
Y Gweinidog Diwylliant a Chwaraeon
Minister for Culture and Sport



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-403
Ein cyf/Our ref JG/00673/13

William Powell AM
Chair Petitions Committee
Ty Hywel
Cardiff Bay
Cardiff
CF99 1NA

committeebusiness@Wales.gsi.gov.uk

8 May 2013

Dear William

Thank you for your letter of 8 April seeking my views on the petition led by Sian Ifan, asking that the Welsh Government be instructed to purchase Plas Cwrt yn Dre, Newtown.

I have considered the additional information provided by the petitioner with interest. However, there is nothing contained within this further submission by the petitioner that compels me to review the decision not to take the property into State care.

As the Minister for Housing, Regeneration and Heritage set out in his letter of 19 July 2012, the building is listed and the local planning authority is able to protect the character of the property, when a purchaser is found, through the requirement to obtain listed building consent for any works of alteration or extension which would affect its character as a building of special architectural or historic interest.

Yours

John

John Griffiths AC / AM
Y Gweinidog Diwylliant a Chwaraeon
Minister for Culture and Sport

Eitem 5.10

P-03-301 Cydraddoldeb i'r gymuned drawsryweddol

Geiriad y ddeiseb

Rydym ni, sydd wedi llofnodi isod, yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i sicrhau y rhoddir yr un gefnogaeth a chymorth uniongyrchol i'r gymuned drawsrywiol ag a roddir i gymunedau tebyg, fel y grwpiau cymorth ar gyfeiriadedd rhywiol, i hyrwyddo cydraddoldeb ar gyfer y gymuned drawsrywiol ac ymwybyddiaeth ohoni.

Cyflwynwyd y ddeiseb gan: Transgender Cymru

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 28 Medi 2010

Nifer y llofnodion: 113

P-04-362 Gwasanaethau Ambiwllans ym Mynwy

Geiriad y ddeiseb:

Rydym ni o'r farn y dylai Mynwy gael y ddarpariaeth ambiwlans briodol. Gan fod disgwyl i boblogaeth Mynwy gynyddu, a bod Uned Mân Anafiadau Monnow Vale wedi cau'n ddiweddar, bydd rhagor o alw ar y gwasanaeth ambiwlans.

Cynulliad Cenedlaethol Cymru:

Rydym yn gofyn i Bwyllgor Iechyd a Gofal Cymdeithasol y Cynulliad Cenedlaethol gynnal ymchwiliad i'r gwasanaeth ambiwlans yng nghefn gwlad Cymru. Byddem yn annog y Pwyllgor i ymchwilio i'r problemau penodol sy'n bodoli ym Mynwy a pha effaith gafodd cau'r Uned Mân Anafiadau yn Monnow Vale ar y gwasanaeth ambiwlans.

Llywodraeth Cymru:

Rydym yn annog y Gweinidog Iechyd a Gwasanaethau Cymdeithasol i ddefnyddio'i phwerau i'w gwneud yn ofynnol i Ymddiriedolaeth GIG Gwasanaethau Ambiwllans Cymru ddarparu gwasanaeth ambiwlans o safon uchel ledled Cymru ac yn enwedig mewn ardaloedd gwledig fel Mynwy.

Ymddiriedolaeth GIG Gwasanaethau Ambiwllans Cymru:

Rydym yn galw ar Ymddiriedolaeth GIG Gwasanaethau Ambiwllans Cymru i wella'r ddarpariaeth ym Mynwy mewn termau real, gydag uned dibyniaeth fawr a/neu ambiwlans yn nhref Mynwy.

Prif ddeisebydd: Mathew Davies

Ystyriwyd gan y Pwyllgor am y tro cyntaf: 7 Chwefror 2012

Nifer y deisebwyr: Casglwyd tua 450 o lofnodion.

A Strategic Review of Welsh Ambulance Services

April 2013

Professor Siobhan McClelland

OLAETH GIG GWASANAETHAU
AMBIWLANS CYMRU





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Foreword

The Welsh Ambulance Services NHS Trust (WAST) has come under significant and frequent scrutiny since its establishment as a national organisation in 1998.

There has been concern about the way the Trust is funded and managed, and the impact this may have had on the ability to meet performance targets set by the Welsh Government.

The former Minister for Health, Social Services commissioned this Review to establish where improvements can be made to deliver high quality ambulance services, within the context of NHS Wales' strategic direction.

This is a strategic Review focusing on the wider challenges facing the ambulance service. The Review focuses on the ambulance service but recognises its place within a whole system approach to the delivery of care.

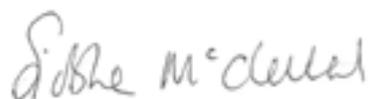
Ambulance services are one part of health and social care and, as such, they are just as much impacted upon by that system as they themselves impact upon it. The whole of the Unscheduled Care System is under very severe pressure affecting the staff who deliver, and patients who receive health care services. While the recommendations within this Review aim to help with this, they have to be considered together with other urgently required measures.

The Trust and NHS Wales in general are facing significant challenges notably in the increasing demand for health and social care services: an ageing population who have a diverse range of needs; public expectations; increasing costs of technology; and a challenging financial position.

WAST has been the subject of many Reviews, possibly more than any other part of NHS Wales, and this in itself has contributed to the issues the organisation faces. I was conscious that this work was seen by some as "yet another Review" creating anxiety and uncertainty and with little chance of significant improvements for patients. I feel strongly that this Review should result in decisive actions and a collective commitment to allow the decisions and changes that flow from them to mature.

I would like to thank the Review Team who supported me in undertaking this work alongside their other duties in what has been a very busy and challenging time. I would also like to thank everyone who took time to talk to us in interviews or focus groups. There are always more people we would like to have spoken to during the Review but I hope that we have been as inclusive as possible.

Finally I would like to pay tribute particularly to the hard work of the staff of the ambulance service, who work day in day out to deliver services to the people of Wales. We need to create an environment in which they can provide services of the highest quality resulting in the best outcomes for patients. I hope that this Review will help with achieving that.



Professor Siobhan McClelland
Review Chair

Glossary of Terms

A

A&E – Accident and Emergency
AED – Automatic External
Defibrillator

C

CAD – Computer Aided Despatch

E

EMS – Emergency Medical Services

F

FAST – Face. Arms. Speech. Time.

G

GP – General Practitioner

H

HCW – Health Commission Wales

L

LHBs – Local Health Boards

N

NHSDW – NHS Direct Wales
NIAS - Northern Ireland Ambulance
Service

O

OOH - Out of Hours

P

PCS – Patient Care Services

R

ROSC – Return of Spontaneous
Circulation
RRV – Rapid Response Vehicle

S

SHA – Strategic Health Authority
SLA – Service Level Agreement
STEMI – ST Elevated Myocardial
Infarction

U

USC – Unscheduled Care

W

WAO - Wales Audit Office
WAST - Welsh Ambulance Services
NHS Trust
WHSSC – Welsh Health Specialist
Services Committee

Executive Summary

Following longstanding concern about the delivery of ambulance services in Wales, the former Minister for Health and Social Services announced in November 2012 that a Review would commence in January 2013. The Review was tasked with making recommendations to enable high quality and sustainable ambulance services for the people of Wales.

To do this, the Review has focused on appraising the effectiveness of current funding, accountability and governance arrangements, and identifying resilient options for the future strategic structure for ambulance services.

The efficacy of current targets and the performance of ambulance services in Wales were also assessed, alongside considerations of the management of WAST as an organisation.

The Review was conducted over a short period of time and took a targeted and pragmatic approach to gathering and analysing evidence. A rapid literature review was conducted to analyse best practice within the UK and internationally, and analysis of previous Reviews of ambulance services in Wales was undertaken, including progress against the recommendations of those Reviews.

Evidence was also gathered from engagement with a wide range of stakeholders, including WAST staff, political representatives and Union members, and evidence was thematically analysed to generate understandings of the key issues facing the ambulance service.

This report contains 12 recommendations that invoke the requirement for an agreed vision for ambulance services, and identify the key challenges which need to be mitigated.

It sets out a range of suggestions which will enable progression towards delivery of robustly managed, sustainable ambulance services which play a central role in an integrated, whole system approach to the delivery of unscheduled care.

The ambulance service has probably been reviewed more than any other part of NHS Wales, and in part this constant cycle of Reviews has created some of the problems it seeks to resolve.

It has also been difficult to establish the extent to which the recommendations from previous reviews have been fully enacted and is, therefore, imperative that the cycle of review upon review is broken to allow the future model for the delivery of ambulance services to mature. Ultimately, any future recommendations need to be accompanied by a clearly measurable work programme.

A Strategic Review of Welsh Ambulance Services

Articulating and agreeing a clear **vision** for ambulance services is the key to any recommendations and future developments which may commence as a result of this Review. Everything else, including how services are planned, delivered and funded should flow from this vision.

Further, ambulance services will play a key role in the shaping of future models of service delivery, and it is vital that they are considered as part of the wider context of any plans for service change for NHS Wales.

The vision for Emergency Medical Services (EMS) - that is emergency ambulance response service - is for the delivery of a robust, **clinical** service that is a fundamental and embedded component of the wider unscheduled care system.

Aligned to an agreed vision for the EMS element of ambulance services, is the future of Patient Care Services (PCS), which deliver planned, non-emergency transport for patients to outpatient, day treatment and other services at NHS Wales hospitals.

PCS should be locally responsive, cost effective and provided on clear eligibility and accessibility criteria, and similarly to EMS, should be seen as a core part of service change proposals. They should also be considered a high priority for whoever is responsible for their delivery.

This Review should be read in conjunction with the Griffiths *Review of Non Emergency Patient Transport in Wales* (2010), and the three-year national programme of non-emergency patient transport pilots. Decisions regarding future direction for PCS should be linked to the outcomes of these pilots.

The Review found a fundamental problem with the current accountability and governance arrangements for ambulance services in Wales which are multiple, complex and lacking in clarity and transparency. This needs to be addressed to create arrangements which are simple, clear and aligned to the agreed vision for service delivery.

Current arrangements require strategic commissioning but the mechanics and levers for achieving this, such as service specifications, Service Level Agreements (SLAs) and contract management, are not being used. Moreover, there is limited capacity and capability to undertake effective commissioning within NHS Wales.

The structural, organisational and systematic problems experienced by WAST make it difficult to establish whether current funding is sufficient or used as effectively and efficiently as it might be. There are, however, some particular problems with funding for capital development. Any future funding formula should be clearly linked to the achievement of the vision for the delivery of ambulance services.

Previous Reviews and actions have placed significant focus on changes to the detail of organisation and management of ambulance services, and the number of changes WAST has experienced at the most senior management levels in particular. Despite

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this many of the problems previously identified remain. This suggests a much more fundamental problem with the organisation itself and how the system it has operated within has impacted on it. This is a difficult and complex issue which does, however, need to be clearly addressed.

There are a number of structural options which could address the current problems which all have advantages and disadvantages and this report sets out three potential strategic options to improve on existing arrangements: a 'Strategic Health Board' model, a LHB Commissioning Model and an LHB Delivery and Management Model.

These options should be assessed against a series of core guiding principles to ensure form follows function. Any future direction of travel should be firmly embedded in an agreed vision for the delivery of ambulance services within the wider health care system.

There is no 'magic bullet' that will resolve the structural difficulties. However, it is important to make a clear decision on the most suitable model, co-create the development of the details of the model with key stakeholders, and implement and allow the arrangements to mature.

Further, there are significant opportunities for NHS Wales to build on existing, alternative care pathways to reduce pressure on overburdened Accident & Emergency (A&E) departments, and ensure patients receive the most appropriate care, from the right clinician, at the right time and in the right place.

Aligned to the development of care pathways is the need for a skilled workforce to make appropriate decisions. To this end, there is a general consensus that the development of a clinical service requires an up skilled workforce with greater levels of autonomy and clinical decision making. It also requires a high level of clinical understanding, support and leadership from within the ambulance service and from other clinicians working in unscheduled and primary care.

The national response time target, which requires 65% of patients categorised as 'life-threatening' to receive a response within 8 minutes, is currently the primary focus for performance management. It is, however, a very limited way of judging and incentivising the performance of ambulance services. Speed is particularly important for some conditions such as cardiac arrest but there is little clinical evidence to support the blanket 8 minute national target.

There is a general consensus that a more intelligent suite of targets and standards which incentivise change and provide a greater focus on patient experience and outcomes should be developed, and these should form part of a range of measures across the unscheduled care system.

Accurate and easily accessible data is fundamental to facilitating rigorous performance management and understanding demand and there is a clear lack of integrated data across the patient journey. Improving data systems and information

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on patient outcomes should be progressed as a priority to support the delivery of emergency ambulance services within a whole system context.

Further, there is limited useful comparative information available to assess performance, quality of care, efficiency and effectiveness, and although WAST has plans in place to ensure more regular and accurate benchmarking, this mechanism needs to be widened to include other comparison measures.

Given the common challenges faced, additional comparative and collaborative research across the UK and internationally should also be supported and encouraged.

Finally, regardless of the future strategic direction and structure of ambulance service delivery, it is imperative that resilient and universally agreed interim arrangements are put in place during any transitional period, to ensure clinically safe services continue without difficulty.

The review makes a number of key recommendations which should be underpinned by a clearly articulated and commonly agreed vision of the future delivery of ambulance services.

Any changes to the ways in which ambulance services are structured, funded, organised and performance managed should be clearly related to the achievement of that vision.

Recommendation 1

Welsh Government and NHS Wales should agree that Emergency Medical Services (EMS) be operated as a clinical service and embedded in the unscheduled care system. This will need to be a key part of the service change agenda.

Further, Patient Care Services (PCS) should be locally responsive, cost effective and provided on clear eligibility and accessibility criteria.

Recommendation 2

Work should begin to disaggregate PCS from the EMS element of Welsh ambulance service delivery, with PCS becoming a routine function of Local Health Boards' (LHBs) business.

Consideration should be given to providing a form of national co-ordination to ensure the resilience and benchmarking of effective PCS across Wales.

Recommendation 3

The future delivery model for NHS Direct Wales (NHSDW) should be further considered within the context of the options for changes in structure and accountability for the ambulance service.

The wider context of the development of the 111 non-emergency number and other advice services also needs to be considered.

Recommendation 4

The fundamental problem with the non-alignment of current accountability, funding and governance arrangements for ambulance services in Wales needs to be addressed.

There are also deep rooted problems with WAST itself and issues also persist in WAST's relationship with partners. Both of these issues need to be addressed.

Recommendation 5

Three main structural options should be considered for the future delivery of EMS: a 'Strategic Health Board' Model, an LHB Commissioning Model and an LHB Management and Delivery Model. Options should be assessed against a series of core guiding principles to ensure form follows function and a clear decision made on the future direction of travel.

Recommendation 6

Robust workforce planning should be put in place to deliver an up skilled and modernised EMS workforce enabling greater levels of autonomy and clinical decision making.

This should be developed in partnership with the NHS, Higher Education Institutions and Regulatory Organisations.

Recommendation 7

Care pathways and protocols should be further developed across the unscheduled care system to allow patients to be treated at the right time and in the right place and reduce unnecessary pressure on A&E. There are considerable benefits associated with alternative care pathways - not least for patients - and all parties should work together to accelerate their development as a priority.

Recommendation 8

The Welsh Government should consider moving from a primary focus on the 8 minute response time standard to a more intelligent suite of targets and standards which work across the whole unscheduled care system.

This should include a greater emphasis on patient outcomes and experience.

The Welsh Government's recently formed Measures Group could provide an opportunity to establish this suite of measures, recognising the co-dependencies across the system.

Recommendation 9

Consideration should be given to developing speed based standards in areas where the clinical evidence demonstrates a clear impact on outcomes, for example formalising the standard for 4 minute responses to calls categorised as cardiac arrest and publishing it on a monthly basis to encourage improvement.

Consideration should also be given to developing a wider threshold analysis of the 8 minute target.

Recommendation 10

Consideration should be given to introducing incentive based targets, for example a non-conveyance or appropriate rate target to incentivise greater development and use of alternative pathways, and reduction in inappropriate conveyance of patients to A&E.

Recommendation 11

More joined up and granular data is required across the patient journey through primary, community, acute and social care. This could also be taken forward by the Welsh Government Measures Group

Recommendation 12

Consideration should be given to making a clear decision on the future structural model, accompanied by a robust time-bound work plan for taking that forward. This should be taken forward and co-created with key stakeholders.

Welsh Government and NHS Wales should also put resilient interim arrangements in place during any transitional period to ensure clinically safe services continue without difficulty.

Approach

The Review was conducted over a relatively short period of time commencing on 14 January 2013 and concluding on 31 March 2013. The Review was established as a Ministerial Review with governance processes from the Chair of the Review through to the Minister for Health and Social Care. It was led by the Chair, Professor Siobhan McClelland and supported by a Review team drawn predominantly from officials within the Welsh Government Department for Health and Social Services.

The approach to the Review was by necessity highly focused and pragmatic and aimed to be as robust, rigorous and inclusive as possible. Whilst placing the ambulance service within the wider health and particularly unscheduled care context, the Review's focus had to be on the Terms of Reference (see Appendix 1) set by the former Minister for Health and Social Services for the Welsh Government.

A technical document, which includes a compendium of data, detailed stakeholder analysis and further international benchmarking information, is available and can be used to read alongside this report.

A broad methodology was developed and followed for the Review comprising the following components:

Literature Review

A rapid review was conducted of the literature on the provision of ambulance services within the UK and internationally. The primarily web based literature search focused on locating documents that provided practical analysis as opposed to academic discourse.

Given the dynamic nature of the provision of ambulance and health care services, the search focused on documents produced in recent years.

The literature was analysed against the key headings of the Terms of Reference, together with identifying any models of good practice in the strategic provision of ambulance services within the UK and internationally.

A summary of the Literature Review is provided in Section 1 of the Review with a full list of the references provided in Appendix 3.

Analysis of Previous Reviews of the Ambulance Service

WAST has been the subject of a significant number of Reviews, both internal and external, since its inception in 1998. These range from broad Reviews of the service through to more detailed Reviews of operational efficiency and effectiveness.

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Previous Reviews were analysed against the Terms of Reference and the extent to which recommendations from previous Reviews had been acted upon were established, although it was not always easy to find a definitive answer.

The summary of the Review's findings are provided in Part Two of this report and a full list of Reviews considered is set out in Appendix 2. More detailed analysis of previous Reviews can be read in the technical document.

Data Analysis

We analysed ambulance service performance, workforce and financial data and also undertook some comparative analysis of performance although it should be noted that this is limited by data not necessarily being directly comparable (for example in the point at which response times start to be measured).

Whilst this data analysis need to be placed in the wider context of data on demand and performance for unscheduled care, we focused on the data that specifically relates to the ambulance service, and the majority of this data was provided by WAST.

A wider analysis of demand and performance across the unscheduled care system has been undertaken by the Wales Audit Office (WAO) which is due to report to the National Assembly for Wales' Public Accounts Committee in the near future. Their report and this Review can be read as complementary documents.

Importantly, there are limitations in the data available across the whole healthcare system (from primary care through to hospital services), in particular integrated data across the patient journey, which impedes meaningful whole systems analysis.

Stakeholder and WAST Staff Engagement

Stakeholder and staff engagement were seen as integral elements within the Review process and this took place at three levels as outlined below. All stakeholders were interviewed either face-to-face or via the telephone using a semi-structured topic guide in line with the Review's Terms of Reference. This process ensured issues raised by the interviews were relevant to the Review.

A detailed review of potential stakeholders was undertaken with WAST and Welsh Government officials and agreed by the Minister, to ensure that the stakeholders interviewed were representative of the areas they operate in. This process also ensured there was sufficient understanding of the issues and challenges facing a modern day ambulance service. In total 88 stakeholders were interviewed.

Assessing Stakeholders' Influence and Importance

It is important to understand that individuals and groups behave differently in different situations and the impact stakeholders can have on the Review is

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dependent on their relationship to either WAST itself or the issues of concern, or both.

Once a list of possible stakeholders was created, a matrix was developed to estimate their influence and importance, and key stakeholders were identified as those that could potentially affect or be affected by the Review.

Stakeholder interests were then assessed against the power and influence matrix and the potential impact of the Review on these interests, and the following main stakeholder groups were interviewed:

Stakeholders within WAST

Interviews were conducted with the Chief Executive and Chair of the Trust, members of the Board and members of the Senior Management Team. Trade Union representatives were also interviewed.

Stakeholders outside WAST

A number of ambulance service stakeholders were interviewed including politicians, representatives of the police and fire services, the Wales Air Ambulance charity, Local Government, the third sector, Community Health Councils, First Responders, representatives from LHBs including key clinicians, employees of the Welsh Government and Chairs and Chief Executives of LHBs.

Informants outside NHS Wales

Interviews were conducted with key informants who had particular expertise and experience in the provision of ambulance services outside Wales. This included key individuals in England, Northern Ireland and Scotland. These interviews focused on experiences, benchmarking, and models of good practice in the strategic provision of ambulance services across the UK.

Focus Groups

WAST staff were invited to attend one of nine focus groups held between 19 February and 5 March 2013, and each lasted 90 minutes. Staff were selected at random through a vertical slice of the WAST payroll to ensure focus groups were representative of the organisational structure below senior management level.

Each of the focus groups followed an agreed proforma to ensure consistency. The background, purpose and areas covered by the review were shared with each of the focus groups and the participants were assured of confidentiality. All facilitators were independent of WAST.

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The focus groups were asked about the three main challenges currently facing the ambulance service and were guided towards discussions around the following four areas in specific:

- Structure;
- Funding;
- The organisation and delivery of ambulance services; and
- Performance, demand and targets;

The participants were asked to suggest the top three ways to improve the ambulance service, and facilitators took notes and encouraged participants to express their opinions in their own words by using flip charts on tables. Where participants came with notes from other colleagues they were asked to ensure all areas had been covered and each session had a 'final thoughts' session.

Written Submissions and Correspondence

The Review did not seek written submissions or evidence given the timescale and approach. Written submissions were received from WAST and UNISON following the face to face interviews conducted between the Chair and WAST and UNISON representatives. A range of correspondence was also received and this is summarised in the technical document.

Analysis

Interviews were conducted in a confidential environment with assurance given to stakeholders that comments would not be attributed.

Stakeholder and focus groups' verbal and written comments were typed up and merged into a large document for analysis against the Terms of Reference. The long document was read and then discussed by the Review team to establish common themes, and this provided the basis for the findings featured in Part Two of this document. The longer document is summarised in the separate technical document.

I) Background: A History of WAST

WAST was established in 1998 following the *All Wales Ambulance Service Review* (1998) which recommended the creation of a single ambulance service by the amalgamation of four existing ambulance Trusts, and the ambulance service provided by Pembrokeshire and Derwen NHS Trust.

The 1998 Review concluded that this move would deliver benefits by removing artificial boundaries between organisations, improving resource management, developing expertise and sharing best practice and enhancing quality and cost effectiveness.

In 2007, NHSDW became part of the Trust following its previous hosting arrangement with the Swansea NHS Trust.

Facts and Figures

WAST serves a population of 3.1 million, across 7,969 square miles, employs 2,576 staff and had a budget of £158million in 2012/13 (*WAST Annual Report 2011/12*).

Funding and Accountability

WAST is funded by LHBs through the Welsh Health Specialist Services Committee (WHSSC) who agree service requirements for LHB areas. WAST is formally accountable for the delivery of services to the Welsh Government.

Services Delivered

WAST provides clinical care and health related transport as part of its two core services:

- **Unscheduled Care Services**

Emergency and urgent care services which are not pre-planned by the patient, available 24 hours a day, 7 days a week and dealing with patients who have illnesses ranging from immediately life-threatening to a minor injury. The emergency ambulance response element of WAST services are known as EMS.

In 2011/12, the Trust received 760,000 direct calls, of which 430,000 were emergency 999 calls and provided 52,000 journeys to hospital following a call from patients' GPs.

NHSDW provides a 24 hour health advice and information service, signposting the people of Wales to the most appropriate level of healthcare for their needs. In 2011/12, the Trust received 326,048 NHSDW calls, with a further 963,767 website hits (*WAST Annual Report 2011/12*).

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▪ Planned PCS

Planned PCS or non-emergency patient transport is the provision of transport for patients to a variety of planned hospital appointments and outpatient clinics. This includes transport to dialysis, chemotherapy and diabetic clinics.

In 2011/12 the Trust transported patients to their hospital appointments on over 1 million occasions and transported 10,000 non-emergency patients to 200 treatment centres throughout Wales and elsewhere (*WAST Annual Report 2011/12*).

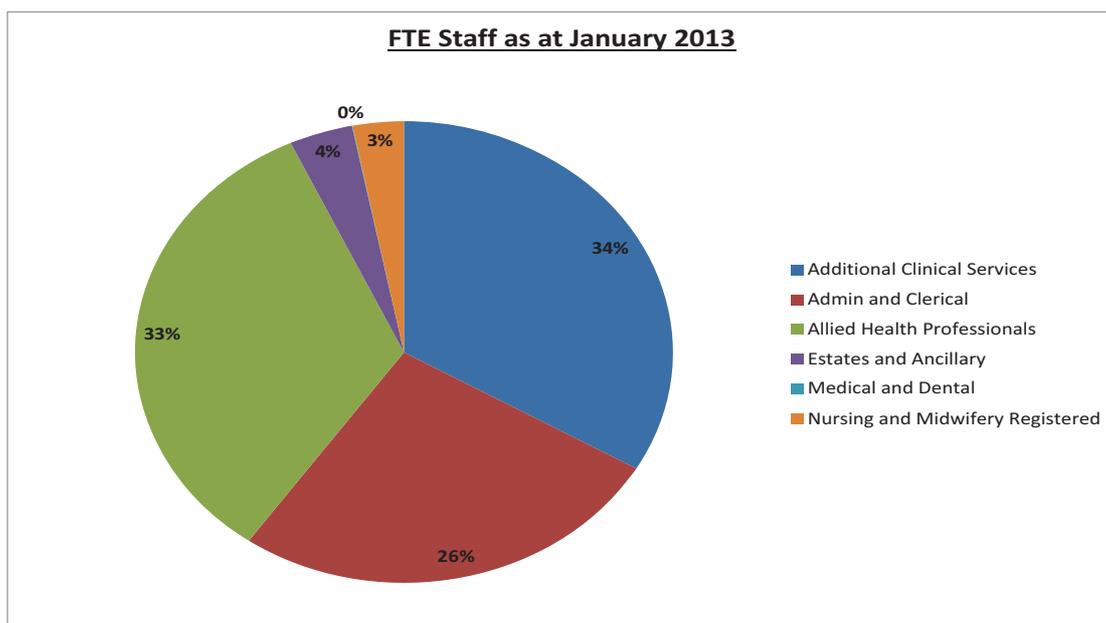
The Health Courier Service also forms part of WAST's PCS work, supporting communities across Wales with daily contact to GP surgeries supporting needle and clinical waste disposal, syringe exchange schemes, pharmacists and working with Health Boards in the safe and dynamic movement of hospital items. HCS works in close partnership with Local Health Boards to proactively implement and develop service improvement programmes

Workforce

The Trust employs in the region of 2,576 staff. Staff members are employed in:

- EMS;
- PCS;
- Control and Communication;
- NHSDW;
- Management; and
- Administrative support.

Figure 1 Full Time Equivalent Welsh Ambulance Services NHS Trust Staff (Source: WAST)



Infrastructure and Fleet

The Trust has over 300 vehicles, 90 ambulance stations, three control centres, three regional offices and five vehicle workshops.

Other Providers

A range of other organisations provide PCS for those eligible for the service across Wales which is funded via individual SLAs with LHBs, which are all different although operate under an overarching, national SLA. Further details on PCS delivery arrangements are featured on page 21.

The **Wales Air Ambulance Charity** works in partnership with the Trust to take patients with life threatening injuries in difficult to reach locations rapidly and comfortably direct to specialists without having to go to a local A&E and wait for transfer.

There are three 'helimed' crews based in the North (Caernarfon), Mid (Welshpool) and South (Swansea) of Wales. Each crew has one pilot and two advanced life support paramedics who are trained in the latest techniques in pre hospital emergency care to ensure the patient receives the most effective treatment.

The Charity is funded through charitable donations and Welsh Government provides additional funding to WAST (via LHBs) to fund the costs of WAST employed paramedics who travel on board the air ambulance.

Emergency Service **co-responders** provide emergency medical cover in areas that have been identified as having a greater need for ambulance cover. Mid and West Wales Fire and Rescue Service provides co-responder cover for WAST from 14 stations across the region.

The aim of a co-responder team is to preserve life until the arrival of either a Rapid Response Vehicle (RRV) or an EMS vehicle. Co-responder vehicles are equipped with oxygen and automatic external defibrillation (AED) equipment.

Community Support

Community First Responder Groups volunteers attend 999 calls where appropriate and provide first hand emergency care to people in their own community. First Responders operate in the same way as co-responders.

Previous Reviews

WAST has come under significant scrutiny since its establishment as a national organisation in 1998. There has been widespread concern about the way in which the Trust is funded and managed and the impact these issues may have had on its inability to meet performance targets set by the Welsh Government.

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This has resulted in at least 13 Reviews or audits into the delivery of services by WAST since 2006. This Review was not conducted in isolation from previous reviews which were analysed as a means of understanding the current situation and potential future directions of travel.

A focused literature review was performed to establish if there were any lessons to be learned from previous reviews which could inform the findings of this report (a full list of reviews considered can be seen in appendix 2), and to establish how far the recommendations of previous reviews had been taken forward.

The analysis of previous review work raised a number of consistent themes for the ambulance service, the Welsh Government and Local Health Boards and which are factored into the findings section of this report.

Key Points

The Ambulance Service has been reviewed probably more than any other part of the NHS.

In part this constant cycle of reviews has created some of the problems it seeks to resolve. Further, it is difficult to establish the extent to which all the recommendations from previous reviews have been enacted.

The cycle of review upon review needs to be broken and any future recommendations need to be accompanied by a clearly measurable work programme.

WAST's Strategic Direction

Previous reviews have helped to shape the Trust's current operational delivery and planning and the organisation's most recent five year strategic framework *Working Together for Success* was published in December 2010.

The framework set out the following vision for the organisation: *'An ambulance service for the people of Wales which delivers high quality care wherever and whenever it is needed;*

And a strategic aim: *'We will move from being perceived as simply a transport service to a provider of high quality health care and scheduled transport services'.*

The strategy document also focuses on three strategic objectives:

1. To achieve all of the national quality standards and clinical requirements;
2. To provide the right service with the right care, in the right place, at the right time with the right skills; and
3. To provide high quality planned patient care services which are valued by users.

Unscheduled Care Services Strategy

The Trust, through its strategy, set out criteria for success for patients using the unscheduled care service:

- Ensure patient calls are answered promptly;
- Safely and effectively assess patients clinical needs;
- Instantly provide patients with (or direct them to) the right service;
- Respond quickly to patients with immediately life-threatening conditions, with four minutes being the norm for cardiac, stroke and serious trauma cases;
- Treat more patients over the phone;
- Treat more patients at the scene of their accident;
- Provide more treatment options for patients in their homes and support them in remaining there;
- Share patient information routinely with partners;
- Develop evidence based clinical practice and care pathways;
- Stop patients being taken to or attending an A&E department unnecessarily and reduce the number of patients who are admitted to hospital;
- Routinely measure success against a range of clinical outcomes and patient experience; and
- Be viewed as excellent by the public, patients, partners and peers.

The delivery of the strategy is supported by a number of key enabling strategies and plans including those for ICT, workforce, fleet and notably a clinical strategy. The Trust implemented a new way of responding to calls to its 999 service in December 2011. The 'clinical response model' aims to provide the right service with the right care, in the right place, at the right time and with the right skills, ensuring that the sickest patients in Wales receive a timely response.

The implementation of the clinical model was also intended to have a positive impact on performance against the national 65% standard. However, after an immediate improvement in performance where the target was met consistently for a number of months, performance has subsided resulting in a period of nine consecutive months where the target has been missed (June 2012 – February 2013).

Patient Care Services (PCS): Griffiths Review

In addition to delivering emergency services, the Welsh Ambulance Services NHS Trust is also responsible for the provision of non-emergency patient transport. This service is used to transport patients, with medical need, to and from hospitals.

Following a number of critical audit reports of the Trust and examples of poor patient experience a review on non-emergency patient transport, led by Win Griffiths, was undertaken, concluding early in 2010.

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Following the Review and public consultation, a three-year national programme of non-emergency patient transport pilots commenced, involving the Trust, LHBs and the voluntary sector, to test out different models of transport provision and identify evidence based methods for improving non-emergency transport for service users.

As part of the Review's recommendations, the Welsh Ambulance Services NHS Trust commenced its PCS Modernisation Plan which identified key elements of the existing service which could be built upon and improved.

The Minister for Health and Social Services is expecting to receive a report detailing the outcome of the pilots in June 2013.

NHSDW and Emerging Service Developments

NHSDW provides a national 24 hour health advice and information service, both telephone and web based; this includes a dental helpline for a number of LHBs. Management of NHSDW was transferred from Swansea NHS Trust to WAST in April 2007 to provide a more integrated unscheduled care service in Wales.

Since 2011, NHSDW has also provided a nurse led clinical triage service for Category C (non-emergency) 999 calls. All callers to 999 and 0845 are provided with an initial assessment to ensure that calls are prioritised in accordance with the clinical need of the patient.

As the only national telephony platform in Wales, NHSDW also provides support for other health initiatives and currently answer calls to the smokers' helpline number.

There are plans to develop the over 50s health checks and there have been early discussions with NHSDW, with a view to ensuring the emerging programme complements the work of NHSDW and vice versa. There are also plans for an on-line resource for expectant and new parents with the potential for NHSDW to host this.

NHS 111 is the 24/7 free to call number for non-emergency NHS healthcare currently being introduced in England. A national group is considering how the 111 number could be used to deliver a range of telephone and web based services in Wales.

The group is developing a service model which in the short term aims to address the immediate pressures on GP Out of Hours services, the ability to dispatch an ambulance if needed, and the advice and information services currently provided by NHSDW. In the longer term, the service aims to deliver an integrated approach to planning urgent care, chronic conditions management and social care.

II) The Context of NHS Wales – A Whole System Approach

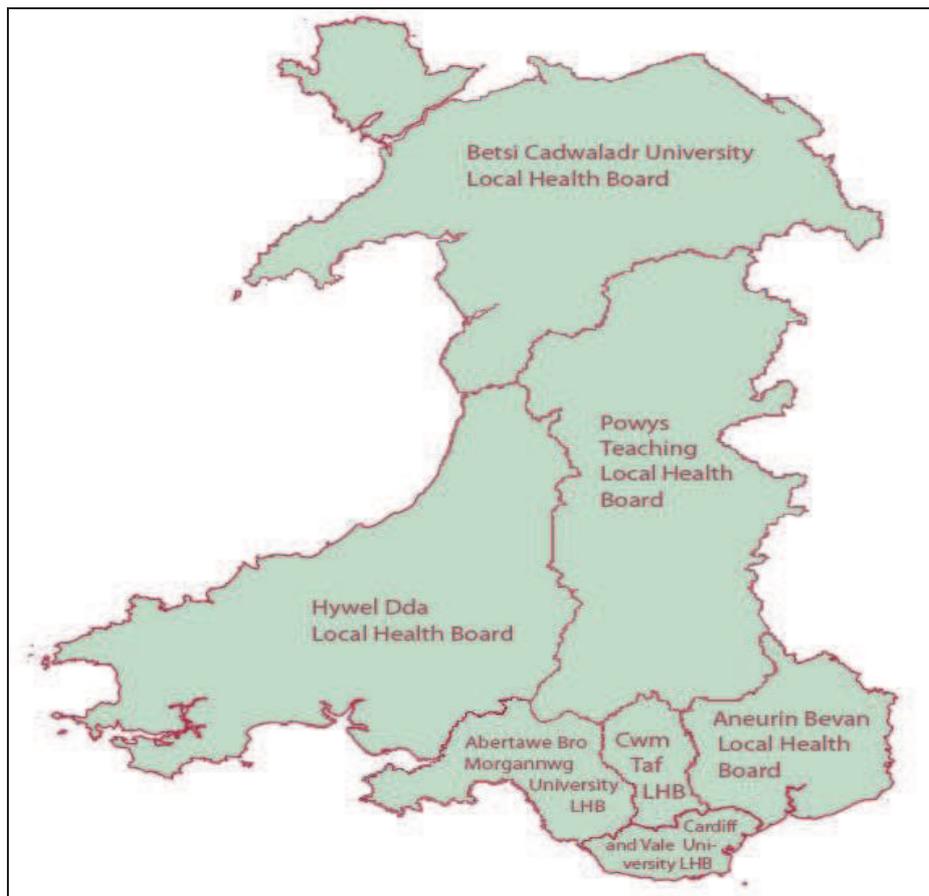
NHS Wales Organisation

In October 2009, the previous NHS Wales structure of 22 Local Health Boards (LHBs) and seven NHS Trusts was replaced with seven integrated Local Health Boards, responsible for all health care services.

In addition, a new unified public health organisation, Public Health Wales NHS Trust, became fully operational, and Velindre NHS Trust, the specialist cancer Trust, continued along with WAST as established providers of goods or services for the purposes of the NHS.

The new simplified structure was intended to transform the NHS into an integrated health care system which works closely with Local Government and the Third Sector through partnership working and ensuring that public health is central (*NHS in Wales - Why We Are Changing the Structure (2009)*).

Fig 2 NHS Wales' Seven Local Health Boards



NHS Wales' Strategic Direction

It is important to read this report in the context of NHS Wales and the Welsh Government's strategic policy direction for the delivery of healthcare services in Wales, and, more specifically, the wider policy context for urgent and emergency care services – which form the core business for the Welsh Ambulance Services NHS Trust.

The Welsh Government's wider vision for the delivery of health services best suited to Wales but comparable with the best anywhere by 2016 is set out in its *Together for Health* (2012) document.

The document outlines the challenges facing the health service and the actions necessary to ensure it is capable of world-class performance. It is based around community services with patients at the centre, and places prevention, quality and transparency at the heart of healthcare.

The Welsh Government states its intention to achieve world-class health and social services by organising all local services as part of a single 'co-ordinated' system, where all elements work seamlessly and reliably to offer a personalised response.

Together for Health (2012) suggests that this vision is to be achieved through:

- Improving health as well as treating sickness;
- Delivering one system for health;
- Hospitals for the 21st century as part of a well designed, fully;
- An integrated network of care;
- Aiming at Excellence Everywhere;
- Absolute transparency on performance;
- A new partnership with the public; and
- Making every penny count.

Specifically, the 2012 document sets out this overarching NHS vision for better access and improved patient experience is intended to be achieved through the following improvement:

- Easier access to primary care services;
- Developed pathways of care across the NHS to improve patient experience and effectiveness of services;
- Improved links across primary, community, acute and social care in line with the Setting the Direction document – *Figure 3* sets out how an integrated healthcare concept looks;
- More services available 24 hours a day, 365 days a year;
- More information on services and on health issues available by telephone through the 111 non-emergency number; and

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- Reduced inappropriate demand on emergency care services by educating the public about the range of health and social care services available to them through the Choose Well campaign.

Figure 3 Integrated Healthcare System Concept Diagram



To support the delivery of this whole system vision, the Welsh Government has worked in partnership with NHS Wales to produce a number of enabling strategies and policies including the Annual Quality Framework, Annual Quality Plan, Standards for Health Services for Wales, Setting the Direction and the 1000 Lives (Plus) Programme.

NHS Wales Service Change Plans

NHS Wales has recently completed or is undergoing a range of public consultations over the future configuration of health services, with a view to changing the models of delivery of some services.

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The plans include the *South Wales Programme* (covering LHBs in South Wales), *Your Health, Your Future* (covering Hywel Dda Local Health Board), *Changing for the Better* (covering Abertawe Bro Morgannwg University Health Board), *Healthcare in North Wales is Changing* (covering Betsi Cadwaladr University Health Board) and *New Directions* (covering Powys teaching Health Board).

These plans are currently the subject of ongoing debate and it would not be appropriate to comment further within this report however it is clear that ambulance services should be seen as a key component in delivering service change as part of a whole system stretching from primary and community care through to the provision of tertiary specialist services.

Key Point

Ambulance services will play a key role in the shaping of future models of service delivery, and it is vital that they are considered as part of the wider context of any plans for service change for NHS Wales.

Current and Emerging Challenges for Health and Social Care

Together for Health (2012) suggests the principal challenges faced by NHS Wales are rising demand, increasing patient expectations, and financial constraint and recruitment difficulties.

Further, many of the causes of poor health are deep-rooted and they are often difficult to tackle. Along with other countries, Wales faces an obesity epidemic and rates of smoking, drinking and substance misuse continue to cause concern. Clinical practice is also changing, and in some areas NHS Wales is facing acute difficulties in recruiting specialist staff.

Allied to these problems, *Together for Health* (2012) suggests that within two decades it is estimated almost one in three people in Wales will be aged 60 or over. By 2031, the number of people aged 75 or over will have increased by 76 per cent. Older people are more likely to have at least one chronic condition – an illness such as diabetes, dementia or arthritis - and have more as their age increases.

The impact of such chronic conditions on people's lives and services in Wales is of growing concern and Wales has the highest rates of long-term limiting illness in the UK accounting for a large proportion of unnecessary emergency admissions to hospital (*Designed to Improve Health and the Management of Chronic Conditions in Wales: An Integrated Model and Framework* 2007).

In recent years rising demands and expectations were largely matched by increased budgets but the current financial situation means that NHS Wales is delivering

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services in a 'flat cash' environment. NHS organisations continue to plan on the basis of a flat-cash settlement for the 2013-14 and for future years beyond that. Organisations need to balance the need to find sufficient savings year on year to offset cost pressures of around 5% while at the same time generating sufficient headroom to make transformational service improvements.

The impact of cost pressures and service improvements will vary from organisation to organisation. Whilst ambulance services will not experience many of the cost increases facing the integrated health boards, they will nevertheless have their own specific pressures which they will need to continue to plan to meet through efficiencies.

NHS Wales' Strategic Direction for Urgent and Emergency Care

The Delivering Emergency Care Services (DECS) Strategy was published in 2008 and set out the need for an integrated approach for delivering unscheduled care in Wales.

One of the main principles of the DECS Strategy was to ensure that people have a better understanding of the range of unscheduled care services that are available to them and clearly understand how to access these services quickly and appropriately. DECS also aimed to provide a framework for action focusing upon re-balancing the system to deliver an effective and efficient service which was coming under increasing pressure.

In 2010, as part of implementing the 5 year Service Workforce and Financial Framework 2010/11 (SWAFF), which co-ordinates and oversees the key priorities for the new NHS, eleven National Programmes were established including the National Unscheduled Care Programme by the Welsh Government.

The Programme Boards were established to support the delivery of the opportunities identified in the restructured NHS. A National Programme Board for Unscheduled Care was established to 'Support NHS and local Communities adopt a system-wide approach to change, engaging partners throughout acute, primary and community Care and the voluntary sector, to redesign unscheduled care processes and systems across the total patient journey' (Terms of Reference, Unscheduled Care Programme Board 2010).

The Board's output included the "10 Transformational Steps" document which sets out a 10 step approach to delivering a co-ordinated approach needed to reduce pressure on A&E and ambulance services, and ensure immediately life-threatened patients have access to time critical treatment.

The Board was renamed the National Urgent and Emergency Care Board in 2012 and has developed the 'transformational steps' into ten high impact areas. The ten areas are designed to provide a resource to support improvement changes, generate ideas

and create the climate of innovation required to deliver safe, effective and efficient services for unscheduled care.

National Urgent and Emergency Care Board “10 High Impact Areas”

High impact area
1. There is a shared vision for USC across all stakeholders
2. We have defined together with stakeholders how we will measure improvement and monitor it regularly together and act upon it
3. We have improved telephony and care co-ordination so they are no longer a system constraint on USC improvement
4. We have improved access to primary care so it is no longer a constraint on USC improvement
5. OOH services are no longer a constraint on the USC system
6. We are satisfied that we have got the messages right to USC system users and Health and Social Care staff and they are acting upon them
7. We know and actively manage in primary care patients by risk and have active care co-ordination and packages managing all our high risk groups including frequent users
8. We have optimised flow through ED, into the hospital and through to discharge
9. We have a discharge planning process agreed with stakeholders that is keeping patients who are medically fit from staying unnecessarily in hospital
10. We know our most important pathways within USC , have shared plans with stakeholders to manage these pathways effectively to avoid admissions and bypass ED when appropriate

Source: Welsh Government

The ten high impact areas work will be complemented by a work programme for unscheduled care designed to accelerate improvements and alleviate pressure on emergency care services through greater collaboration across the whole unscheduled care system.

Welsh Government ‘Measures Group’

The Welsh Government established the Measures Group to provide an opportunity to discuss how to measure the NHS and determine what the measurement system should look like for 2013/2014 and beyond. The Group also aims to develop a cross cutting measure system that includes Social Services, Children & Families which

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focuses on prevention; experience & access; quality, safety and outcomes; integration; and sustainability.

WAO Review of Unscheduled Care

The WAO intends to publish a report on unscheduled care shortly which aims to track progress made since the publication of *Unscheduled Care: a Whole Systems Approach* (2009).

The 2009 report expressed concerns about the effectiveness of urgent and emergency care delivery in Wales and detailed a series of recommendations towards delivering a whole systems approach to their delivery.

The latest review will seek to understand whether there has been progress in transforming unscheduled care services to address the issues previously identified in WAO publications.

The Francis Report

The Francis report, released in February 2013, made recommendations on patient safety and quality of care following failures at Mid Staffordshire NHS Trust and has clear implications for the future of service delivery for NHS Wales.

Part 1 – Literature Review

Introduction

A literature review search was undertaken for reports on international ambulance service best practice and recent documents produced on ambulance services in the UK and internationally. This section of the Review summarises the analysis of the literature with some comparative data used in the second section of the report. Details of the source references are provided in Appendix 3.

Care does need to be taken in attempting to compare ambulance services internationally particularly in the benchmarking of data given the different methods of data collection, methods of measuring performance, varying organisational and policy contexts, definitions of service (which often have a wider definition of EMS) and varied methods of funding and providing services.

This applies even within the UK and becomes more challenging outside the UK. Comparison is perhaps more helpful in more specific areas of operational practice than in strategic direction.

The current evidence base for ambulance performance measures is sparse although the majority of literature available indicates that systems are moving from single target focus to set of performance indicators. Despite a well developed literature on reducing demand, there is little prospective research looking at reducing demand. The issue is widely recognised.

The literature search found a limited amount of recent documents explicitly about ambulance services to inform the findings of this review. Articles and reports were generally single country focused providing limited opportunity for robust and systematic comparison.

The most often cited comparative document was the SHA *“Emergency Services Review: A comparative review of international Ambulance Service best practice”* (2009). The focus of this work was on international comparisons, response time targets, performance indicators (and benchmarking) and dealing with increased demand.

The report summarised that Ambulance Services within the UK were considered “amongst the high-performing medical services from around the world” and confirmed our findings that there was limited research from which to directly compare services internationally, stating that “At present the inability to directly compare pre-hospital healthcare systems makes it impossible to identify system factors that would obviously improve performance, quality of care or efficiency and effectiveness”.

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The report did, however, draw out the following key points:

- Two main systems of pre-hospital care were identified: Paramedic led (with medical governance) and Physician led. Neither obviously outperformed the other;
- The problems of increasing demand for services, both pre-hospital and emergency department care, are universal and very few strategies have been robustly tested to combat such increases. Despite a well developed literature on reducing demand, there is little prospective research looking at reducing demand;
- Systems seem to be moving from a single target focus to a set of performance indicators; and
- The current evidence base is sparse and the most convincing evidence for pre-hospital care relates to defibrillation and providing advanced life support as quickly as possible to those needing it.

UK Ambulance Services

The development of ambulance services within the UK has been strongly influenced by the Department of Health's strategy '*Taking Healthcare to the Patient*' (2005). This identified that ambulance services are playing an increasingly central role in the provision of care to patients in the NHS, not just providing a rapid response to 999 calls and transporting patients to hospital but becoming "a mobile healthcare service for the NHS".

The use of modern technology and wider clinical skills has enabled an increasing range of care to be provided from a mobile environment (an ambulance) to a wider range of patient groups – those who require an emergency response, those who have an urgent care need, those who can be treated in a primary care setting, through effective and co-ordinated multi-disciplinary team working and those who could be provided with definitive advice and treatment over the phone.

England

There are currently 11 regionally-based Ambulance Trusts providing emergency and urgent healthcare and some patient transport services in England, with separate arrangements for the Isle of Wight. Ambulance Trusts have been merged over recent years into larger provider based organisations. As part of a commissioner/provider system ambulance services have been commissioned from their Trusts by Primary Care Trusts and at present ambulance commissioning and contract management capability lies within PCT clusters.

Ambulance Trusts in England have a membership that reflects the requirements for successful application for Foundation Trust status and this means it is possible to have no ambulance professional on the board. The membership includes a Chief

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Executive, often from a non-ambulance service and sometimes even from a non-health service background; Director of Operations, who also may not have an ambulance service or an operational background; Director of Finance [and IT]; Director of Human Resources; Director of Nursing; and a Medical Director. There are also a number of Non-Executive Directors selected for their expertise, and Foundation Trusts have Members from a wide background across the community they serve.

Figure 4 Ambulance Trust regions and the population they serve

Ambulance Trust	Population serving
East Midlands Ambulance Service	4.8 million
East of England Ambulance Service	Over 5.83 million
London Ambulance Service	Over 7.5 million
North East Ambulance Service	2.66 million
North West Ambulance Service	7 million
South Central Ambulance Service	Over 4 million
South East Coast Ambulance Service	Over 4.5 million
South Western Ambulance Service	Over 5.3 million
West Midlands Ambulance Service	5.4 million
Yorkshire Ambulance Service	Over 5 million
Isle of Wight Primary Care Trust	140,000

(Great Western Ambulance Service Trust was merged into the South Western Ambulance Service Trust in February 2013.)

In most areas PCTs have a formal agreement as to how they will work together on ambulance commissioning, backed up with shared governance arrangements. There are lead commissioners (one for each region) and associate commissioners (one for each PCT or PCT cluster in a region) involved in the process. Both lead and associate commissioners – usually meet as part of an ambulance commissioning consortium – are responsible for agreeing strategic plans, priorities and funding across their PCTs.

The lead commissioner translates this into commissioning intentions and then negotiates contracts and specifications for ambulance services while also managing the performance of ambulance Trusts.

These arrangements are currently in a period of transition and uncertainty as the new arrangements for the NHS in England with the creation of Clinical Commissioning Groups come into place.

The following clinical performance criteria are used within England:

- Cardiac arrest return of spontaneous circulation at hospital
- Cardiac arrest survival to discharge
- Compliance to provision of ST-Segment Elevation Myocardial Infarction (STEMI) care bundle including reperfusion

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- STEMI 30 day mortality
- Stroke - proportion of FAST test positive patients arriving at acute stroke centre
- Proportion of calls closed with telephone advice
- Proportion of patients discharged without transportation
- Re-contact rate following closure with telephone advice
- Re-contact rate following non-conveyance
- Calls abandoned before answered
- Mean time to answer calls
- 'Service experience narratives'
- Time to call answering (initial assessment)
- Time to treatment
- Category A 8 minute response (revised)
- Unexpected mortality rate following discharge of care by telephone or face-to-face.

The House of Commons Committee of Public Accounts published “Transforming NHS Ambulance Services” in September 2011. This report summarised the following conclusions and recommendations:

- Ambulance services provide a valuable service that is held in high regard for the care it provides for patients, but more could be done to improve efficiency and value for money;
- Under the NHS reforms it is not clear who will be responsible for achieving efficiencies across ambulance services or intervening if an ambulance service runs into financial difficulties or fails to perform. It was also not clear who would be responsible for commissioning ambulance services under the reforms to the English NHS;
- Performance information on ambulance services is not always comparable, making it difficult to benchmark services and identify the scope for efficiency improvements;
- Focusing on response time targets has improved performance but has also led to some inefficiencies;
- Delays in handing over patients from ambulances to hospitals lead to poor patient experience and reduced capacity in ambulance services; AND
- Ambulance services do not collaborate sufficiently with other emergency services to generate efficiency savings

NHS 111 has been implemented in parts of England and strong evidence suggests that there has been a significant increase in 999 ambulance workload as callers who would not have presented themselves to the ambulance service have been transferred to it by 111's triage system. The national roll out of NHS 111 in England is currently under consideration.

Scotland

The Scottish Ambulance Service (SAS) is a Special Health Board and a national operation based at over 180 locations in five Divisions. The Service is now co-located with NSS Scotland, NHS 24, NHS Boards' Out of Hours services and within hospital and GP practice premises.

It covers the largest geographic area of any ambulance service in the UK. The SAS provides scheduled, unscheduled and anticipatory care for patients in remote, rural and urban communities across Scotland.

The Strategic Framework "*Working Together for Better Patient Care 2010-15*" was published in 2010. The Strategy sets out the aims to be patient centred, clinically excellent and leading-edge. In its Annual Review of 2011/12 SAS cites the following key achievements:

- Improved Category A response times from 72% in 2010/11 to 73% in 2011/12;
- Increase from 14.5% to 16.9% ROSC across Scotland for patients in cardiac arrest;
- Emergency response within 8 minutes for patients in cardiac arrest improved from 77.4% to 78.3%;
- % of hyper-acute stroke patients taken to hospital within 60 minutes improved from 75.5% to 78.4%;
- Responses to emergencies within the highly rural Island Boards improved;
- Significant reduction in number of scheduled care cancelled journeys;
- Increase of 0.8% of emergency incidents treated at scene;
- Significant internal redesign of scheduled care service with the introduction of mobile technology within all patient transport services;
- Evaluation of a more consistent alternative care referral pathways for frail and elderly fallers developed in partnership;
- Joint approach with NHS Highland for paramedic delivered health checks as part of the wider anticipatory care programme which helps maintain paramedic skill levels in remote areas as well as boosting primary care resources;
- Development with NHS 24 of new clinical content to support implementation of a Single Clinical Triage Tool;
- Opening of Scottish Ambulance Academy and development of BSc in Paramedic Practice;
- Investment in clinical advisors within Ambulance Control Centres to enhance clinical support and decision making; and
- Implementation of formal professional-to-professional advice line within NHS Borders and NHS Lothian with plans to roll out nationally

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The Review identifies the following key challenges:

- Response time against Category B and one hour GP urgent calls has fallen;
- Overall emergency demand has increased particularly in Category B;
- Implementing new rest break arrangements; and
- Managing attendance levels which continue to be lower than the national average and agreed targets.

Northern Ireland

The Northern Ireland Ambulance Service (NIAS) has a similar structure and scope of service provision as English ambulance services. It does however act as a one nation service although the population of Northern Ireland is the smallest of the home nations. It does not focus on clinical performance indicators instead focusing on the time-based standards previously used in England.

As a regional ambulance service NIAS operates from one Emergency Ambulance Control (EAC) Centre based at Ambulance Headquarters in Belfast. NIAS has an operational area of approximately 5,450 square miles and is serviced by a fleet of over 300 ambulance vehicles.

NIAS responds to the needs of a population in Northern Ireland in excess of 1.7 million people in the pre-hospital environment. It directly employs over 1,100 staff, across 57 ambulance stations/deployment points, two Ambulance Control Centres (Emergency and Non-Emergency), a Regional Training Centre and Headquarters.

NIAS reports its performance for 2011/12 as follows:

During 2011/12 the Northern Ireland Ambulance Service received 142,026 emergency calls and 35,386 Doctors Urgent calls from across Northern Ireland.

An emergency ambulance attended and delivered care to the patient for 132,447 emergency incidents, arriving within 8 minutes for 82,787 of those calls requiring an ambulance.

International Countries (non UK)

In the significant majority of ambulance services throughout the developed world the geographical scope of organisations are coterminous with municipalities rather than states or countries. This is also true for fire and police services, for public health services, and for the providers of public amenities.

One consequence of this is that service managers from one organisation are more likely to be in the same position of decision making and authority when in meetings with managers from other emergency or health service providers. Another factor to consider is that there tend to be variations in culture on a regional or perhaps even a

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smaller scale, and this has implications for how staff identify with an organisation and subsequently how they are best managed.

Much of the debate internationally has been on the benefits of merging emergency services. There is little evidence to support the merger of emergency services, despite this being a common model in the USA. It tends to result in unhelpful over-resourcing of at least some emergency calls and, whilst not addressed in the discussion above, frequently results in the fire division asset-stripping the ambulance service.

Certainly one of the most recent and major mergers of New York City's formerly 'third service' ambulance division with its fire department resulted in *increased* EMS response times and ongoing industrial relations problems with its paramedics and fire fighters.

In Melbourne, Australia the dispatch centres of Police, Fire and Ambulance were emerged and outsourced to the private sector for a period of time: again this proved to be dysfunctional and a more traditional model has been re-adopted.

However, none of this is to suggest that the fire service could not contribute to the provision of an emergency medical service. In the UK the majority of fire engines carry an automated external defibrillator (AED) with at least one fire-fighter trained and able to use it. Both have been paid for through public funding, but neither is likely to be put to good use. The fire service's case for this equipment is to treat cardiac arrest in fires or at road traffic accidents if they arrive before the ambulance service although in reality (it has been argued by some) such patients do not have the type of heart dysrhythmia that responds to an AED.

So a case could be made for putting the Fire Service's defibrillator to good use, if the fire service were to be routinely dispatched to cardiac arrest calls in urban and sub-urban areas where there are staffed fire stations. Their response time may be faster than the ambulance service's and more likely to fall within the five minute window for successful treatment. Such an arrangement for example can be found outside the USA, for example in Melbourne, Australia, where it has been running successfully for years.

It is not unreasonable to suggest that for most 999 calls with a genuine medical problem clinical, caution demands a face to face examination of a patient before the difficult decision can be made to refer them to a non-emergency health practitioner or to discharge them from NHS care altogether. This is demonstrated by the relatively high proportion of 999 calls that are transferred to NHS Direct which are transferred back to the ambulance service for an emergency response - ultimately most of these patients do not have a time-critical problem.

In the current clinical response model of EMS delivery, around 42% of calls are categorised as 'life threatening' or Red 1 calls. The remaining calls fall into the non-life threatening nor serious, or 'Green' calls category. Green calls do, however, often

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require some form of transport to hospital or another healthcare provider. The system also acts as a safety net for calls categorised as low priority but under further clinical triage are upgraded to Red 1 calls.

The phenomenon of numbers of ambulances queuing outside Emergency Departments unable to offload their patients for extended periods of time is seen in a number of countries in addition to the UK, including Australia, Canada, New Zealand and the USA.

Only two interventions seem to be effective. One is to have a unit situated next to the emergency department staffed by GPs on a 24-hour basis, so that appropriate patients can be triaged to them at the door of the ED. The other strategy, likely to be more successful, is for the ambulance service to bring a lower proportion of their 999 cases to ED because they have either treated and discharged them in the field or referred them to more appropriate NHS services.

In terms of performance targets, different countries seem to have varying response times but compliance standards are not always available so it is difficult to make comparisons. The 8 minute target is used most generally despite the limitations of clinical evidence to support this target. However, in some countries there have been attempts to move away from this including work in Canada suggesting a move to a 5 minute target (for 90% of people) could increase lives saved and also suggesting measuring survival outcome in hospital discharge rather than Return of Spontaneous Circulation (ROSC).

Signs of ROSC include breathing (more than an occasional gasp), coughing, or movement and for healthcare personnel, signs of ROSC may also include evidence of a palpable pulse or a measurable blood pressure. Data is collected on ROSC at the time of the event and until admission and transfer of care to medical staff at the receiving hospital.

Survival to hospital discharge is measured at the point at which the patient is discharged from acute care. Using this measure would indicate survival to discharge, including a possible rehabilitation period in a local hospital before long-term care and home care.

It is as stated difficult to make robust international performance and benchmarking comparisons. One of the main challenges is around timing (when measurements start and end) and how accurate and comparative these are. Despite these limitations there do however appear to be a number of jurisdictions where response standards are poorer than in Wales, for example in Australia.

The main and perhaps most important issue to emerge on benchmarking is that it is widely recognised that sole reliance on response times is restrictive and a poor reflection of ambulance service work.

Few ambulance services around the world provide non-emergency patient transport

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services in the same manner as in the UK. Often services outside the UK will provide semi-planned transfers, discharges and admissions, but not the full range of outpatient and day patient transport services. The functional split within the UK Ambulance Service in the 1980s allowed each service to develop separately, and opened PTS to competitive tendering exercises.

Key Points

There is limited comparative evidence on most effective strategic and organisational models for the planning and delivery of ambulance services. There has been a general international direction of travel to increasing the organisational size of ambulance services (which generally comprise EMS) while much debate has focused on co-location of emergency services.

There is limited useful comparative information available to compare performance, quality of care, efficiency and effectiveness. The WAST project to ensure more regular and accurate benchmarking needs to be widened to include other comparison measures.

Given the common challenges faced further comparative and collaborative research across the UK and internationally should be supported and encouraged.

Part 2 – Review Findings

The Vision for Welsh Ambulance Services

Whilst the focus of the Review was welcomed by many stakeholders, it was generally felt that rather than just look at the ambulance service in isolation, there is a need for Wales to take a whole system view of unscheduled care within which ambulance services need to be located.

A large number of stakeholders concluded that it was important to make some decisions about what we want from an ambulance service in Wales. The following questions were posed:

- Do we want an emergency service?
- Do we want a 999 emergency transport service?
- Do we want a mobile medical service?
- Do we want a transport service (scoop and run)?
- Do we want a taxi service or a clinical service?

There was a general consensus that EMS should be a clinical rather than transportation service and this supported the view that it had to be considered as part of the wider unscheduled care system, both in terms of the services it provided and the development and organisation of the workforce.

Key Points

Articulating and agreeing a clear vision for ambulance services is the key to any other recommendations and future developments.

The vision for EMS Services is a clinical service that is a fundamental and embedded component of the unscheduled care system. PCS services should be locally responsive, cost effective and provided on clear eligibility and accessibility criteria.

Structure of Ambulance Services in Wales

Current NHS Wales Structure

Prior to 2009, the NHS structure in Wales was characterised by a division of responsibilities between LHBs as commissioners of health services and NHS Trusts as providers of such services.

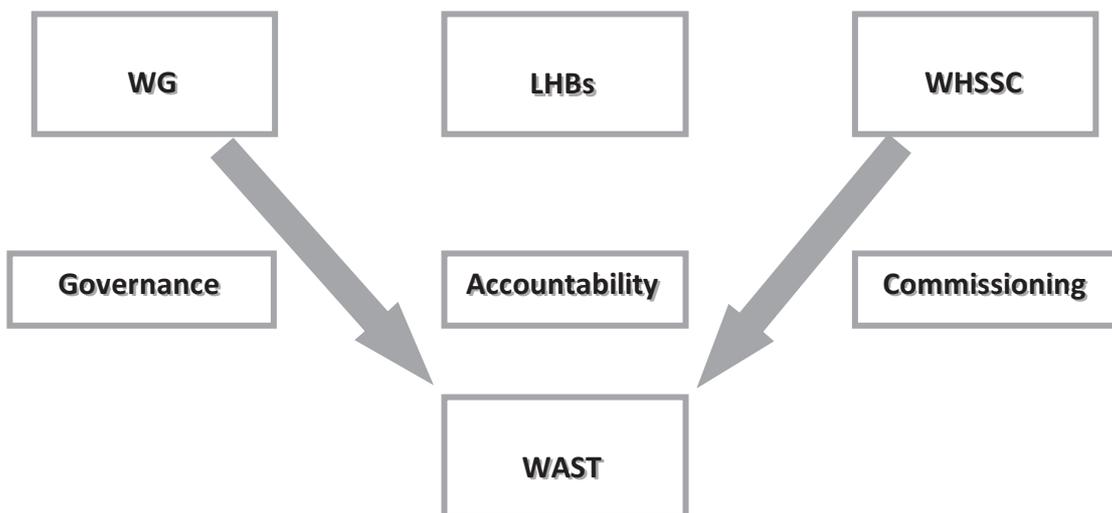
Following the restructure of NHS Wales in 2009, seven LHBs - responsible for securing and improving services for their population in their area in a specified area of Wales – and three NHS Trusts – responsible for providing goods or services for the purposes of the NHS – were established, replacing the previous structure of 22 LHBs and seven Trusts.

Current Ambulance Services Structure

The planning of emergency ambulance services is currently driven by Welsh Government policy and WAST are accountable to the Minister for Health and Social Services for a suite of key service standards which are set out in the Welsh Government's Annual Quality Framework.

Figure 5 Current Commissioning, Accountability and Governance Arrangements

Commissioning, Accountability and Governance of Welsh Emergency Ambulance Services



Strategic commissioning of services was previously the responsibility of Health Commission Wales (HCW) which was superseded by WHSSC in 2010 and commissioned services from WAST on behalf of LHBs. Commissioning in healthcare is a very well recognised process of assessing the needs of the population and putting in place

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services to meet those needs. It is a proactive and strategic process that has the potential to fundamentally redesign and change the way services are offered to patients.

Existing performance management arrangements are twofold: WAST is performance managed by both WHSSC and the Welsh Government, which holds bi-monthly performance meetings with the WAST Director of Service Delivery and a 6 monthly meeting at Director General and Chief Executive level.

The planned patient care service element of the Trust's business is funded and managed via individual SLAs with seven LHBs which are all different although operate under an overarching, national SLA. NHSDW are funded from within the Trust's budget allocation.

Previous Reviews Findings on Ambulance Service Structure

The WAO *Ambulance Services in Wales* Review (2006) suggested that national commissioning should be maintained and supplemented with more advanced relationships between services at a local level. There is no evidence to suggest that this has been achieved at a local level despite the appointment of Heads of Service Delivery by WAST.

The independently commissioned *Lightfoot* Review suggested that WAST and LHBs would benefit from developing a jointly owned financial and strategic plan for ambulance services. Although WAST and LHBs have engaged at a superficial level over finance, there is little evidence of engagement at a strategic level over ambulance service planning fit to respond to local needs.

The *Lightfoot* Review also recommended that the Welsh Government should work in conjunction with LHBs to develop and agree the future planning and delivery arrangements for WAST, ensuring a clarity and focus upon outcomes and performance. This was superseded by the establishment of WHSSC in 2010 although this work was not taken forward as part of the delivery and commissioning arrangements between LHBs and WAST.

The establishment of the new LHB structure in 2009 was cited as an opportunity for improving performance management structures by the *Lightfoot* Review which suggested the existing Welsh Government performance management arrangements were unclear in respect of how WAST was held to account for delivery of services. The Review suggested the LHB re-structure presented an opportunity for the appointment of a nominated LHB to act as lead commissioner and performance manager for WAST.

The same Review also concluded that the commissioning arrangements for WAST did not facilitate clear lines of accountability between the organisation and its commissioners for the delivery of EMS.

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The WAO *Follow-up Review of Ambulance Services in Wales* (2008) also stated that the overlap between the respective performance management responsibility of the Welsh Government and the principal commissioning role of WHSSC (then HCW) made it more difficult to stimulate improvement in performance.

Stakeholder and Focus Group Findings on Structure of Welsh Ambulance Services

Commissioning

Stakeholders felt that there was little evidence of sound commissioning practices or accountability and performance management of the Trust's contractual delivery lacked ownership and co-ordination.

It was felt that LHBs had insufficient input at planning and budget allocation stages which resulted in delayed agreements over elements of the Trust's budget creating difficulties with delivering consistent and well thought out unscheduled care services.

The commissioning of the *Lightfoot* Review in 2009 was cited by some as requiring a fully costed joint planning approach but this level of joint financial planning has not been achieved despite the clear and significant opportunities associated with more integrated commissioning of the Trust's unscheduled care services.

There was general feeling that the commissioning arrangements through WHSCC were not effective and the absence of any meaningful SLAs between WAST and the LHBs did not support effective performance.

Accountability

Within the current accountability and governance structures it was stated that there was a significant lack of accountability to the LHBs that WAST serve. It was also felt that the accountability to WHSCC was not transparent.

The governance framework (WAST to Welsh Government and the Board to the Minister) was well understood and seen as a well accepted model of governance. However it was felt that the individuals involved are the key to making this effective and there was a feeling that the Board members at WAST were not as engaged and informed as they could be.

It was felt by some stakeholders that WAST needed to be more transparent and accountable to the public on a range of measures, in a similar approach to that adopted by the fire services' all-Wales Dwelling Fire Response Charter (see page 62 for further detail).

A range of stakeholders thought the accountability arrangements for PCS and NHSDW were not transparent. A number of stakeholders felt accountability arrangements could be improved through SLAs, effective commissioning

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arrangements (patients should be at the heart of this framework) and clear lines of accountability within the organisation.

Structure

Stakeholders felt that the decisions on structures should follow a decision about what ambulance services should be delivered in Wales. It was felt that “form must follow function” and that until the strategic issues concerning what Wales actually wants from an ambulance service have been agreed, that structure should not be decided.

Notwithstanding the importance of agreeing what Wales requires from an ambulance service, all those interviewed had views about the current structure and the different parts of WAST.

Stakeholders put forward a number of other opinions and suggestions for the future structuring of ambulance services. These included:

- WAST being structured in line with LHBs with a national oversight being achieved through the creation of a Ministerial Board;
- WAST being established as a regional structure aligned to other emergency services;
- WAST remaining as a national all Wales organisation but embedded within one LHB and operate as a division within this organisation, serving the whole of Wales (it was felt this would remove the management overhead to the service being delivered);
- EMS operated as a national body with a Chief Operating Officer reporting to the Minister and PTS split and integrated into the LHBs; and
- There was a general view that the headquarters needs to be Cardiff based.

Some thought that the three core parts of WAST (EMS, PCS and NHSDW) were not regarded as a good fit and it was suggested that these services may be better delivered through an alternative structural model; others viewed NHSDW as a poor fit with both EMS and PCS;

One suggestion was for NHSDW to become a local service and the resources invested locally within each LHB to create an improved Out of Hours service linking it with A&E triage based on clinical support teams; and that EMS and PCS should be integrated into the LHBs, enabling paramedics to be integrated into the Minor Injuries Unit and result in a different model.

Finally, it was also felt that control centres need to be reduced to a maximum of two and that they could cover the whole pathway and have direct patient accountability. It was believed this could be achieved through the integration of NHSDW into the control centres and engaging GPs through the Out of Hours service for effective triage.

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Many reiterated the need for agreement to be reached on the core functions of WAST before considering issues concerning structure and accountabilities. Notwithstanding the importance that form follows function, it was generally felt that the current structure was not effective and that there was a serious lack of clinical support within the organisation.

Some felt there were too many layers in the structure resulting in a lengthy decision making process, a general lack of empowerment, low motivation levels, high sickness levels and poor internal communications.

There were general views across one of the focus groups that the governance and accountability arrangements were too complicated and that more transparency was required. Some group members suggested there was too much Welsh Government interference in the way the Trust is operated.

There were also concerns expressed about the range of services delivered by WAST, with suggestions that the EMS and PCS services were too much for the organisation to deliver.

A range of suggestions were made by focus group members for a change in structure including support for aligning with the fire service, maintaining a national body but delivering ambulance services locally, aligning with LHBs and forming new regional organisations based on the South Wales Programme and other service change plans.

Key Points

There is a fundamental problem with the current accountability and governance arrangements for ambulance services in Wales which are multiple, complex and lacking in clarity and transparency. This needs to be addressed to create arrangements which are simple, clear and aligned to the agreed vision for service delivery.

Current arrangements require strategic commissioning but the mechanics and levers for achieving this, such as service specifications, service level agreements and contract management, are not being used. Moreover, there is limited capacity and capability to undertake effective commissioning within NHS Wales.

There are a number of structural options which could address the current problems and these all have advantages and disadvantages. Options should be assessed against a series of core guiding principles to ensure form follows function. There is no 'magic bullet' that will resolve the structural difficulties but it is important to clearly decide on the most suitable model, co-create the development of the details of the model, implement and allow the arrangements to mature.

Funding of Welsh Ambulance Services

Introduction

The efficacy of current funding mechanisms together with some consideration of the sufficiency of current funding was primarily considered although the latter, together with analysis of the effective allocation of existing resources, has been an important area for previous reviews.

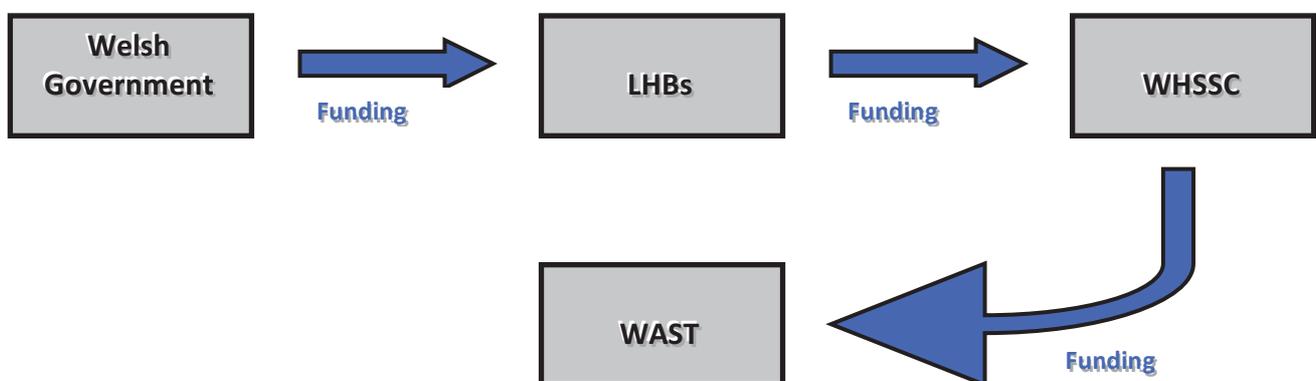
Current Funding Mechanisms

The structural arrangements for funding have remained consistent since 1998 with WAST's unscheduled care services financed through the Welsh Health Specialist Services Committee (WHSSC) – previously Health Commission Wales (HCW).

WHSSC receives this annual funding allocation directly from the seven LHBs from within their discretionary budget allowances, which is provided to them on an annual basis by the Welsh Government. The Welsh Government does not fund WAST directly.

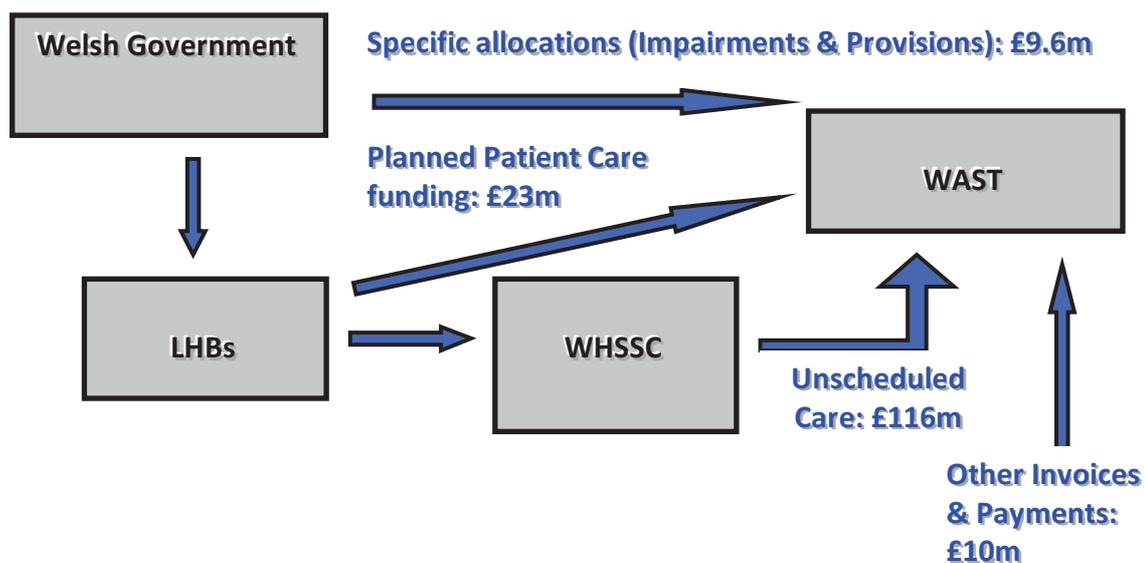
The PCS element of the Trust's business is funded via individual SLA with LHBs, which are all different although operate under an overarching, national SLA.

Figure 6 Unscheduled Care Services Funding Mechanism



The financial contract between WHSSC and WAST is a basic arrangement. The contract is 'rolled over' on an annual basis with an inflationary 'uplift' applied. There is also an 'inflator/deflator' mechanism built into the contract which requires the Trust to absorb any new activity (demand) of 15% or less on an annual basis before any additional resources are applied by WHSSC.

Figure 7 WAST Budget Allocations 2012/13



The Trust received £158.6million from WHSSC for 2012/13, based on the number of calls, attendances and incidents undertaken. WAST also receives funding from a number of other sources including the Welsh Government for capital programmes, meaning there is currently no one organisation responsible for funding the fully loaded cost of providing the EMS service.

In view of concerns about the efficacy of funding arrangements, WAST and HCW jointly commissioned the *Lightfoot* (2009) Review to understand the adequacy of funding and whether it was sufficient to meet national performance targets. At the same time, the 2009 Review aimed to establish whether there were opportunities for WAST to improve the efficiency of its operations.

Previous Reviews Findings on Funding Mechanisms

The *Lightfoot* Review suggested funding arrangements have been unclear in the past and require clarification in the new NHS structure, so that the link between funding and service delivery can be made transparent. The Review also stated that WAST had sufficient overall revenue and staff resources but questioned how efficiently resources were deployed.

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The 2009 Review recommended that WAST should complete a review of the fully loaded cost of providing EMS and PCS in order to establish a sound basis for establishing the funding requirements and the contract currency for the two services. It appears that this has not been followed up by WAST.

The Review recommended that WAST and the LHBs should develop a fully costed plan to implement the actions required to deliver the new delivery model and should establish a joint programme management framework to oversee the implementation of the plan. This does not appear to have been fully acted upon.

The report also pointed to the potential for efficiencies from modernisation and matching resources to demand, but that this, the Review stated, required capital investment, particularly to develop a modern and integrated communications infrastructure.

The *Lightfoot* Review also recommended the Trust should develop robust business cases for all capital investments, including performance gains and revenue savings over a reasonable and achievable timescale and that these should be assessed by Welsh Government. This has been somewhat achieved with a capital assessment process in place although there are still outstanding capital issues notably in the replacement of the Computer Aided Dispatch (CAD) system – the method of dispatching emergency ambulance vehicles by computer.

The *Lighfoot* Review suggested the majority of ambulance trusts in England either have introduced or are currently planning to introduce the current generation of CAD systems and it is on these systems that CAD providers are currently focusing their development efforts. WAST currently operates with an outdated CAD system that has been superseded by a more up to date system from the CAD provider.

As a result, although the system will be maintained, it will not benefit from the enhancements that will be applied to the later system and over time the performance of the current system will lag behind. Consequently the system will have to be upgraded or replaced in the near future if WAST is to maintain a level of performance that is comparable with other Trusts.

The *ORH Review of Control Services* (2012) also stated effective use of resources can lead to better performance. The report suggested substantial performance improvements could be obtained by WAST through strengthening the management of the Control function, reviewing its capacity for ensuring a robust audit, compliance, training and mentoring processes for call-takers and improving control room layouts. This report made further recommendations in respect of efficiencies for management of staff and resources which are featured under the Organisation and Management section on page 49.

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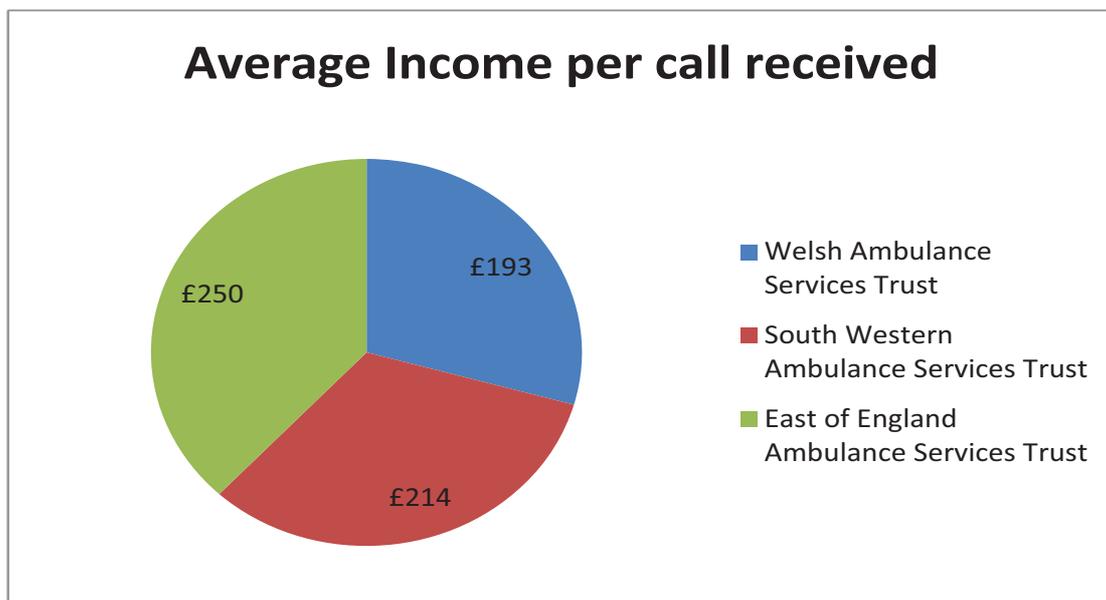
The *Lightfoot* Review carried out a comparative analysis of the funding allocated to WAST and similar Ambulance Trusts in England and reported that WAST received 9% less income per call than South Western Ambulance Service and 22% less than East of England Ambulance Service (2007/08 data).

It also reported that WAST received 8% more EMS calls than South Western Ambulance Service but 14% fewer calls than East of England Ambulance Service, and dividing the EMS income by the number of calls gave the following figures:

- WAST - £195 per call
- South Western Ambulance Service - £209 per call
- East of England Ambulance Service - £250 per call

The Review suggested making comparisons of the efficiency of an ambulance Trust is difficult because of the range and mix of resources available to each organisation. It carried out additional studies to consider a range of additional measures, in order to gain a full understanding of other factors that affect the ambulance service, as well as the efficiency with which the service is operated.

Fig 8 Average Income per Call Received (2007/08)



Within the additional analysis, WAST scored highest in the 'number of incidents responded to per member of front line staff' and the 'measurement of income per member of frontline staff'. The Review concluded that this reflected inefficiency in the way WAST rostered staff, with high levels of overtime and low levels of relief, and recommended running the service with fewer frontline staff.

Stakeholder and Focus Group Findings on Funding Mechanisms

There was a strong consensus that funding of ambulance services need to match aims and objectives for their delivery and reflect decisions about the future structure and model of ambulance service delivery in Wales.

Generally it was felt that the Trust receives sufficient funding to deliver effective unscheduled care services, although there were some who felt that funding was insufficient particularly to achieve the 8 minute target. Efficiencies were suggested in areas such as staff rostering, demand management and reducing lost ambulance hours to fully capitalise on the available resources, which it was felt would result in considerable resources being released.

Key Points

There is a fundamental problem with current funding mechanisms which are not clearly linked to the development of service specifications or SLAs, nor to the performance management of ambulance services. Current arrangements lack clarity and transparency and future funding mechanisms need to address this.

Any funding formula needs to reflect the vision and objectives for the delivery of ambulance services. Currently, the achievement of the 8 minute performance target is a key driver for funding and an agreed vision for a clinical EMS model, with patient outcomes at the heart, would require funding to be appropriately allocated to meet that vision, and to assess whether there is sufficient funding.

The fundamental structural , organisational and system problems experienced by WAST make it difficult to establish whether current funding is sufficient or used as effectively and efficiently as it might be.

In common with the rest of the NHS estate in Wales there are challenges with ensuring the appropriate level of capital funding for example to replace the CAD that need to be addressed.

The Trust's current funding mechanisms were seen by stakeholders as complex, unclear and unnecessarily time consuming. It was suggested that the added value of previously funding WAST through WHSCC was unclear and it was felt that the current system was not transparent. The funding formula, based on a rollover of the previous years allocation was thought to be out of date and there was a view that an appropriate commissioning framework needed to be introduced.

A number of stakeholders felt any future commissioning and funding framework would need to be based on future needs, incorporating issues such as deprivation, rurality, age of the population and future demand projections. It was suggested there were opportunities for SLAs to be put in place with each Health Board alongside effective performance management arrangements.

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The one year funding cycle was not seen to be effective in supporting an organisation that is seeking to implement long-term structural change, as it encourages short term thinking and it was suggested that a three or five year funding cycle may be more appropriate.

A number of members of the focus groups also suggested that existing funding was not allocated fairly on a regional basis, suggesting that although the South East deals with 68% of activity, it was not allocated 68% of resources.

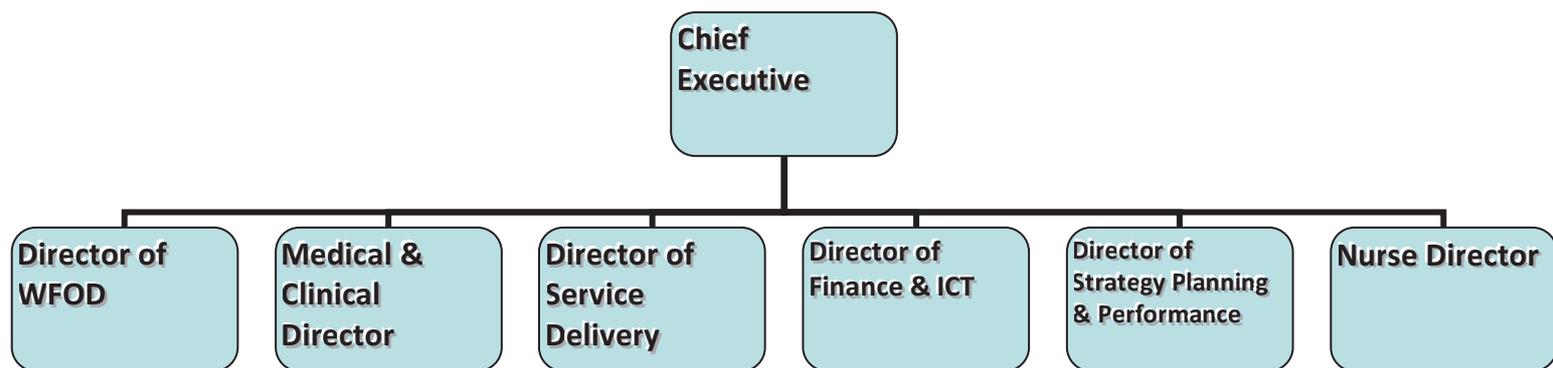
The need for any future funding mechanisms to consider the impact of service change was discussed, particularly in the context of the increased travel times for ambulance staff and resources. A number of focus group members expressed a lack of confidence that an increase in funding will make a difference to operations, indicating they were not convinced management would effectively manage the additional resources.

Organisation and Management of Ambulance Services in Wales

Current Welsh Ambulance Services Organisation and Management Mechanism

WAST delivers EMS, PCS and Health Courier Services and hosts NHSDW. The organisation is overseen by an Executive Board, illustrated in figure 7, which is directly accountable to the Chair, Stuart Fletcher.

Figure 9 Welsh Ambulance Services NHS Trust Executive Structure



The Trust Board formally comprises 13 members, all of whom have voting rights inclusive of a Chairman, seven Non Executive Directors, a Chief Executive and four Executive Directors.

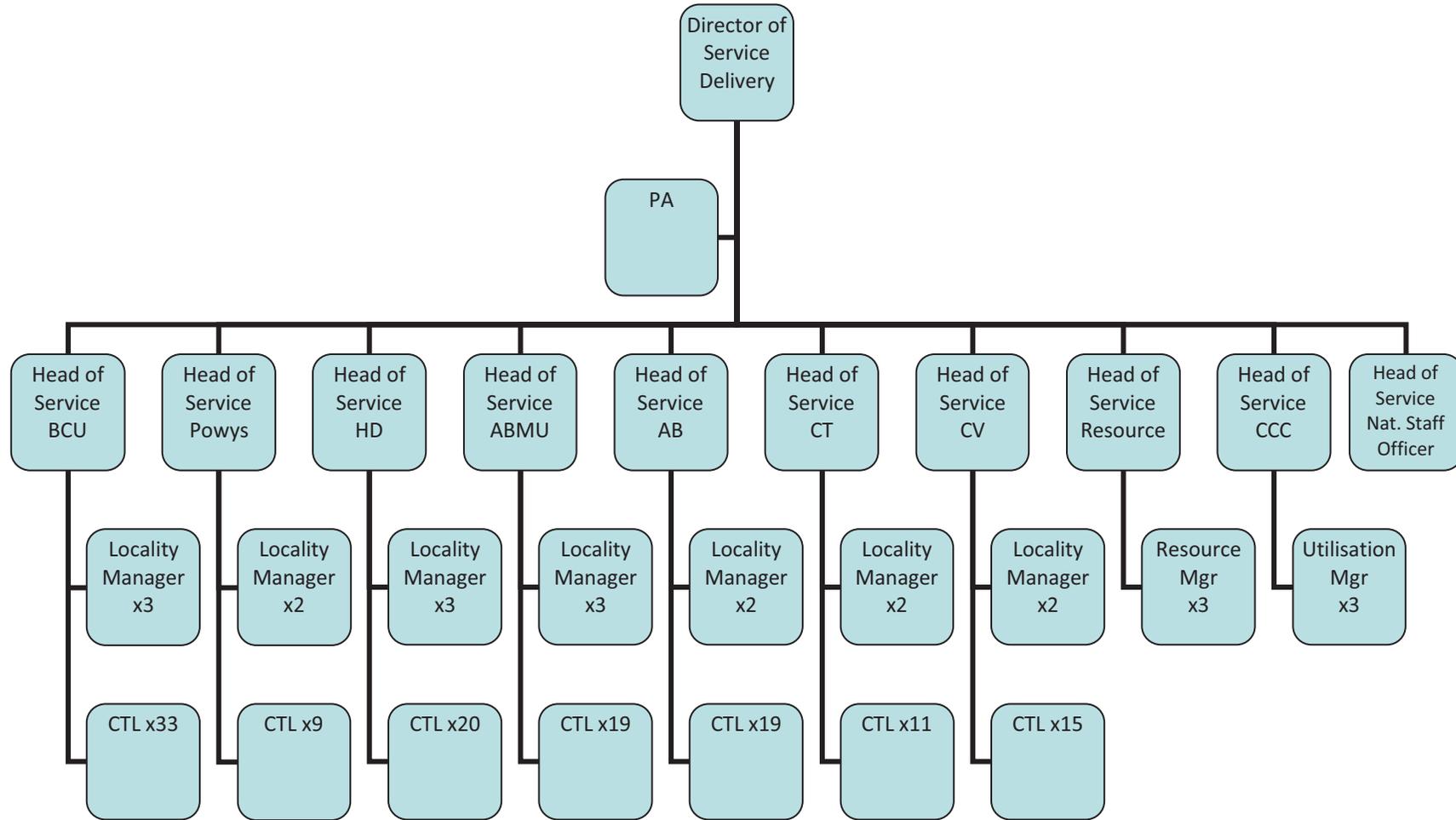
The Board's role is to:

- Set the policy and strategic direction of the Trust;
- Manage the Risk;
- Manage its people and resources;
- Establish governance systems to enable it to effectively measure progress and performance, and to make sure this is achieved; and
- Work in partnership with key stakeholders, both internal and external.

The non-Executive Directors role involves monitoring the Trust's overall strategy and performance and liaising widely with Executive Directors and other key staff.

In 2012, the Trust restructured its management team beneath Board level, moving from a regionally managed approach to the appointment of a Head of Service for each integrated LHB region, in addition to Heads of Service for Resource, Care Coordination Services and a National Staff Officer. Figure 8 overleaf illustrates the WAST Service Delivery Structure.

Figure 10 WAST Service Delivery Directorate



Delivering the Clinical Strategy

The Trust appointed a full time Medical Director in 2011, to lead the Medical and Clinical Directorate and WAST's wider clinical strategy detailed in the *Working Together for Success* document. The strategy aims to 'ensure patients' experience of care and outcomes are the best the Trust can provide', and WAST implemented a clinical response model to drive the delivery of this goal.

The Medical Director is supported by a network of clinical and non-clinical staff across the service delivery and clinical directorates, with additional support from a part time Nurse Director as part of WAST's clinical governance arrangements.

As part of the clinical response model, a 'Clinical Contact Centre' strategy was developed in 2012 and located at its Vantage Point House Headquarters in the South East Region. The Contact Centre is staffed by multi-disciplinary clinical teams made up of call takers, nurses, paramedics and GPs who support control room staff by managing incoming demand through application of clinical critical thinking.

The Clinical Contact Centre is supplemented by clinical assessments undertaken by Advanced Paramedic Practitioners (APPs) at the scene on a 'see and treat' basis. This clinical leadership approach aims to 'foster a culture of clinical leadership and excellence through professionalism across the organisation'.

Specialist and Advanced Paramedic Practitioners are now known as Advanced Practitioners (APs) and Trainee Advanced Practitioners (TAPs) and WAST currently employ **19** Advanced Practitioners and **10** Trainee Advanced Practitioner. Both are able to deliver a range of advanced clinical services which can assess, diagnose, refer and treat patients definitively at scene or signpost them to the most appropriate place for their care.

Previous Reviews Findings on Organisation and Management

Previous Reviews of WAST have focused on specific and detailed organisational and management issues at an operational level. This review is focussed on the strategic aspects, but some common and vital operational findings do arise and have been considered as part of the review.

The 2008 internal Review of WAST's emergency response service indicated that the Trust's corporate governance had improved although clinical governance needed further improvement. The Review suggested the Trust should maintain its progress towards integrating clinical and corporate governance, embed and disseminate key policies and develop clinical governance structures to support new models of service.

The *ORH Capacity Review* (2012) identified that management of Control Room functions should be stronger and more consistent across Wales. Performance management is uneven and ineffective at present and urgently requires

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improvement, with a common system of reporting against key performance indicators, and regular feed back to staff. An effective performance management system was also identified as a key area for improvement in earlier Reviews.

Another common issue raised across the range of reports is poor communication between management and operational staff. The requirement for a clear and effective communications strategy which made roles and responsibilities clear and aid policy and strategic developments featured in the *WAO Review of Ambulance Services in Wales* (2006).

The *ORH Review* also highlighted the importance of addressing and mitigating current and projected increases in demand on ambulance services by increasing staffing capacity. It was felt that the South East area is most in need of additional staff numbers although recruitment across other regions was also required

The *Lightfoot Review* also suggested there was a shortage of staff in certain areas which prevented WAST from undertaking sufficient ongoing professional training. The Review estimated that the cost of additional staff required if WAST were to operate with no reliance on overtime to cover shifts would be in the region of £8.5million.

This overreliance on overtime was identified as a weakness by the *Lightfoot Review* which suggested it did not provide a robust mechanism for managing rosters or represent an appropriate HR policy. The Review identified that it would be imprudent to continue to rely on such high levels of overtime.

The *WAO Follow-up Review of Ambulance Services in Wales* (2008) also suggested staff rosters were inconsistent and resulted in a lack of capacity at peak times, indicating rosters should be based around the needs of patients.

The level of relief built into planning was identified as a weakness by the *Lightfoot Review* which stressed the importance of building relief into resource planning to cover factors such as leave, sickness, training and other planned and unplanned absence. The Review set out that WAST would benefit significantly from increasing its relief factor from a current rate of 28% to the Department of Health's recommended relief factor of 35% to cover issues such as sickness and training.

Sickness absence issues and their longstanding and ongoing impact on operational efficiency were also identified by ORH and the *WAO Review of Ambulance Services* (2006). The recommendation for more robust management of sickness absence is a common theme across the breadth of the reports considered. WAST's sickness absence levels remain the highest of all NHS Wales organisations at 7.23% (December 2012) against an all Wales average of 5.42%.

The *WAO Follow-up Review of Ambulance Services in Wales* (2008) report set out the importance of clarifying roles and responsibilities for executive and non-executive

Board members with more emphasis suggested for active roles for non-executives. There is little evidence to suggest that non-executives roles have become more clear or central to the Trust's delivery of services.

Stakeholder and Focus Group Findings on Organisation and Management

Concerns were expressed, specifically by some frontline staff, during focus groups about the visibility and leadership skills of both the senior Executive team and the Board. Some focus group members also suggested senior staff were not engaging at appropriate levels across Wales.

It was felt by some stakeholders that senior management focused on current operational issues rather than develop the organisation in a strategic manner.

Further, a number of frontline staff felt the organisation's structure contained too many management tiers, stating that this organisational structure reduced accountability and encouraged inefficiencies in operations and decision making.

There was a general feeling that there is a lack of clinical governance and support within the organisation. An element of focus group members felt that the senior team operate very much in their own silos and are too far removed from those delivering the service. It was also stated by an element of staff at a focus group that staff morale was at rock bottom and anecdotal evidence of bullying was mentioned on a number of occasions.

It was felt by some stakeholders that WAST should be led by an individual with medical and/or paramedic experience and it was suggested that consideration should be given to creating a Chief Ambulance Officer to be housed within Welsh Government.

An element of representatives at focus groups felt there is a general culture of fear amongst sections of the organisation. Concerns were expressed by some stakeholders that staff do not feel empowered or comfortable with making decisions as they feel there is little or no support from management.

Other stakeholders perceived the organisational culture as negative and suggested there was no positive experience of change which resulted in a resistance to it. WAST was seen as a military style organisation by sections of WAST staff.

It was felt by some stakeholders that the current structure, policies and strategies are not appropriate for a modern ambulance service and a section of focus group members felt there were not enough human and vehicle resources – qualified paramedics, ambulances, uniform, essential kit or NHSDW call centre staff.

A proportion of staff said they do not feel part of an all Wales organisation as a result of the different procedures in operation across parts of Wales. There were

also concerns raised about the senior management structure which was deemed inefficient in some quarters.

Air Ambulance Services

Recommendations and analysis of the strengths and opportunities for greater use of the air ambulance service was not considered as part of this strategic review in view of the emerging Emergency Medical Retrieval Service (EMRS) work programme for Wales. The charitable status of Wales Air Ambulance / Ambiwylans Awyr Cymru was also factored into these considerations.

The EMRS is in use in Scotland and involves the deployment of a medical team from a specialist centre to a smaller healthcare facility with limited on site resources. The aim of the service is to resuscitate and transfer critically ill patients directly to definitive care.

Given the transfer times of less than 30 minutes across Wales a service of this kind could offer alternative solutions for both rural and specialist health services. However, the Welsh Government has advised that Wales Air Ambulance / Ambiwylans Awyr Cymru has never previously sought capital funding and it would not be appropriate to make recommendations on an issue that is not within the scope of the Terms of Reference.

Key points

Previous reviews and actions have placed significant focus on changes to the detail of organisation and management of ambulance services. In particular the organisation has experienced a number of changes at the most senior management levels. However, despite this many of the problems previously identified remain.

This suggests a much more fundamental problem with the organisation itself and how the system it currently, and has previously, operated within has impacted on it. This is a difficult and not always tangible issue which does, however, need to be clearly addressed.

A clinical model for the delivery of EMS requires the up skilling of paramedics as part of the unscheduled care workforce. This should be achieved by more detailed workforce planning conducted with key partners in the NHS and Higher Education.

There is a general consensus that up skilled paramedics should develop greater levels of autonomy and clinical decision making. This requires the development of pathways and protocols to support this that recognise the wider nature of risk management and partnership working with regulatory organisations in the development of the paramedic profession. It also requires a high level of clinical understanding, support and leadership from within the ambulance service and from other clinicians working in unscheduled and primary care.

Performance

The WAO's forthcoming report on unscheduled care includes a comprehensive study of demand on NHS Wales' urgent and emergency care services. In view of this work, and because this strategic review was not tasked with analysing demand in its Terms of Reference, a detailed analysis of this issue has not been provided.

However, it is important to reference the impact of demand because of the implications a significant increase in activity can have on performance.

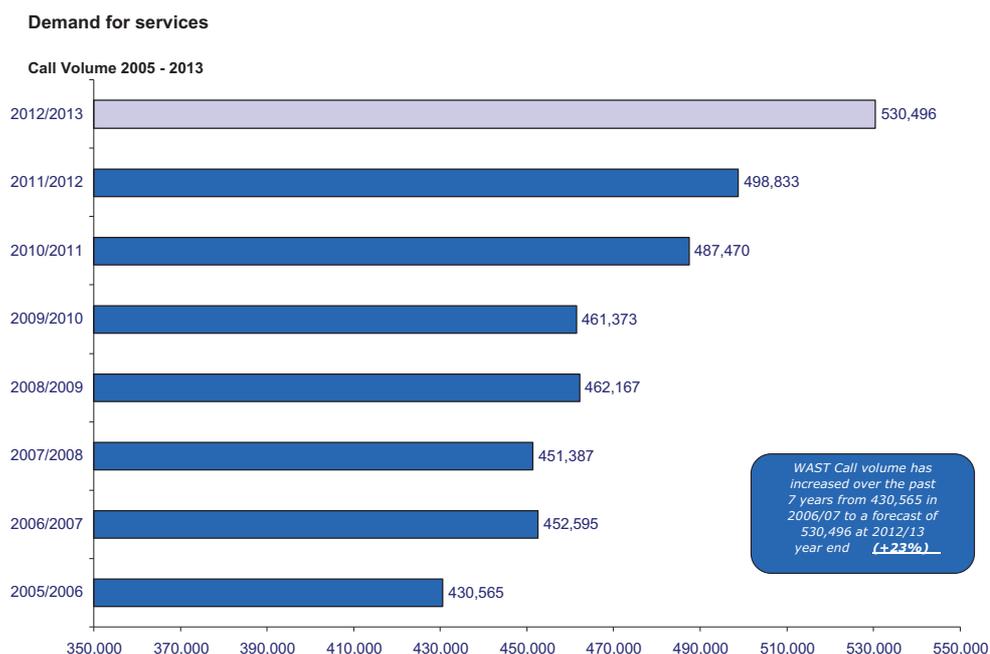
Current Demand on Ambulance Services

In common with other unscheduled care services, WAST has faced rising levels of demand over recent years, resulting in increased pressure and the potential for diminished patient experience and safety. For information on the reasons for increasing demand on unscheduled care services please see the 'current and emerging challenges' section on page 24.

Call volumes to WAST have increased significantly in the past ten years. This increase has been caused by a range of factors additional to the 'standard' increasing pressure referred to above. Call volumes increase significantly during weekends, public holidays and during sporting weekends.

Call volumes have risen by 68% between 2001/02 and 2012/13 and there has been a 29.6% increase in calls categorised as life threatening between 2005/06 and 2012/13. The increase in call volume demand is illustrated in chart 1 which shows an increase in calls from 430,565 to 530,496 over the past 7 years:

Chart 1 Call Volumes 2005/06 – 2012/13 (Source: Welsh Ambulance Services NHS Trust)



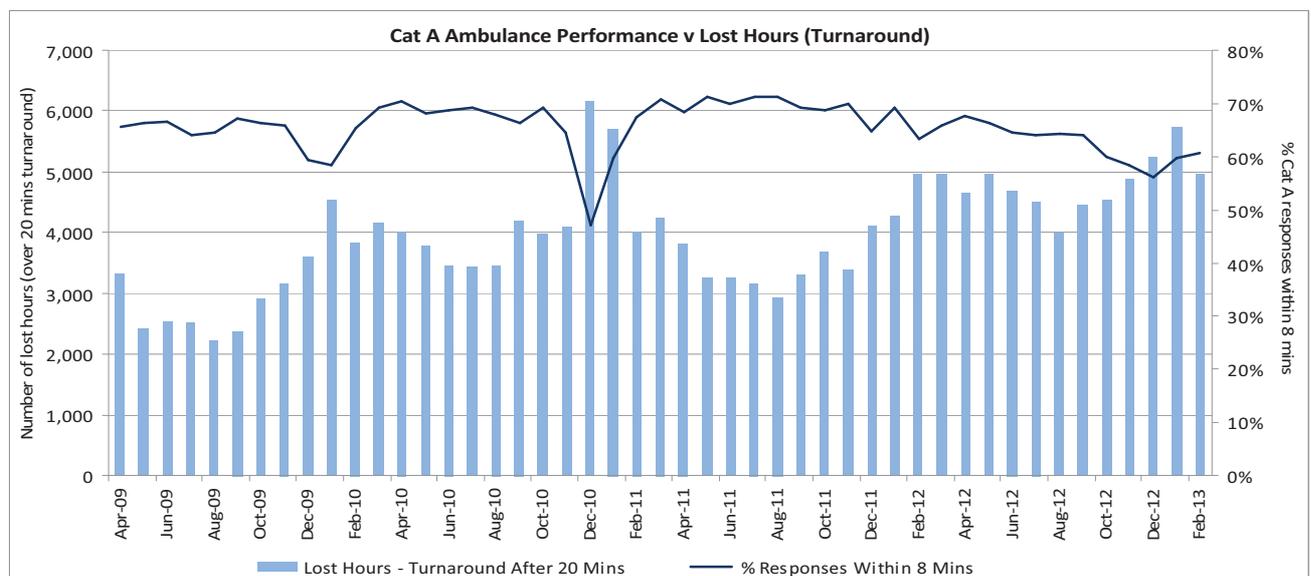
Overview of Current Performance

The Welsh Government’s Annual Quality Framework 2012/13 requires WAST to achieve a range of national standards and targets which demonstrates the quality of service delivered to patients in Wales.

The principal national performance target requires WAST to respond to 65% of all calls categorised as ‘life threatening’, known as Category A until December 2011 and now known as Red 1 or 2 calls, within eight minutes. A separate target for 60% of responses to the same category of call within eight minutes exists on a Unitary Authority basis. ‘Life threatening’ calls include cardiac arrest, stroke and heavy blood loss. In addition to increasing demand levels, WAST face a number of challenges to its ability to achieve these targets:

- Geographical challenges in rural and sparsely populated places, where it is extremely difficult to accurately predict the focus of demand;
- Difficulties during the winter months when inclement weather can cause dangerous driving conditions, resulting in reduced speed;
- Challenges with the topography of some areas resulting in limited access, making it difficult to achieve timely responses;
- Lengthy patient handover delays (or lost ambulance hours) at A&Es in Wales cause particular problems for ambulance vehicles to respond to other calls in the community as they are tied up for extended periods, particularly during times of peak demand. Lost ambulance hours are an international problem but are a significant issue in Wales and the impact of lost ambulance hours on performance in Wales is illustrated in Chart 2 below:

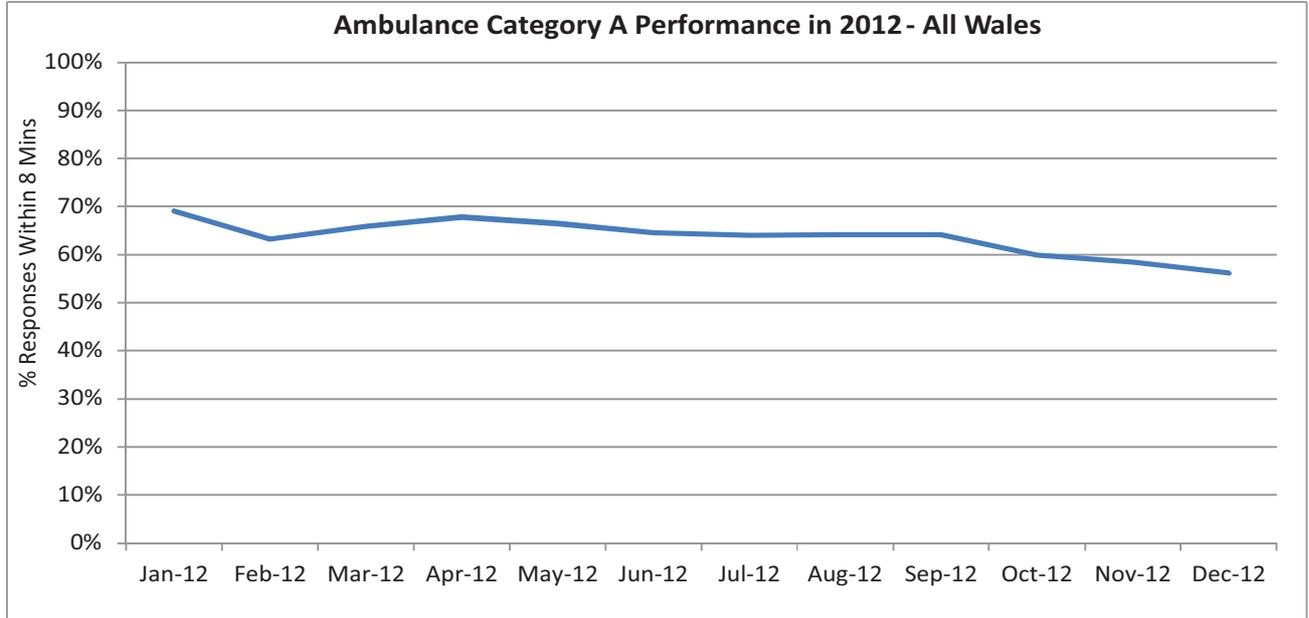
Chart 2 Category A Performance vs. Lost Ambulance Hours (Source: WAST)



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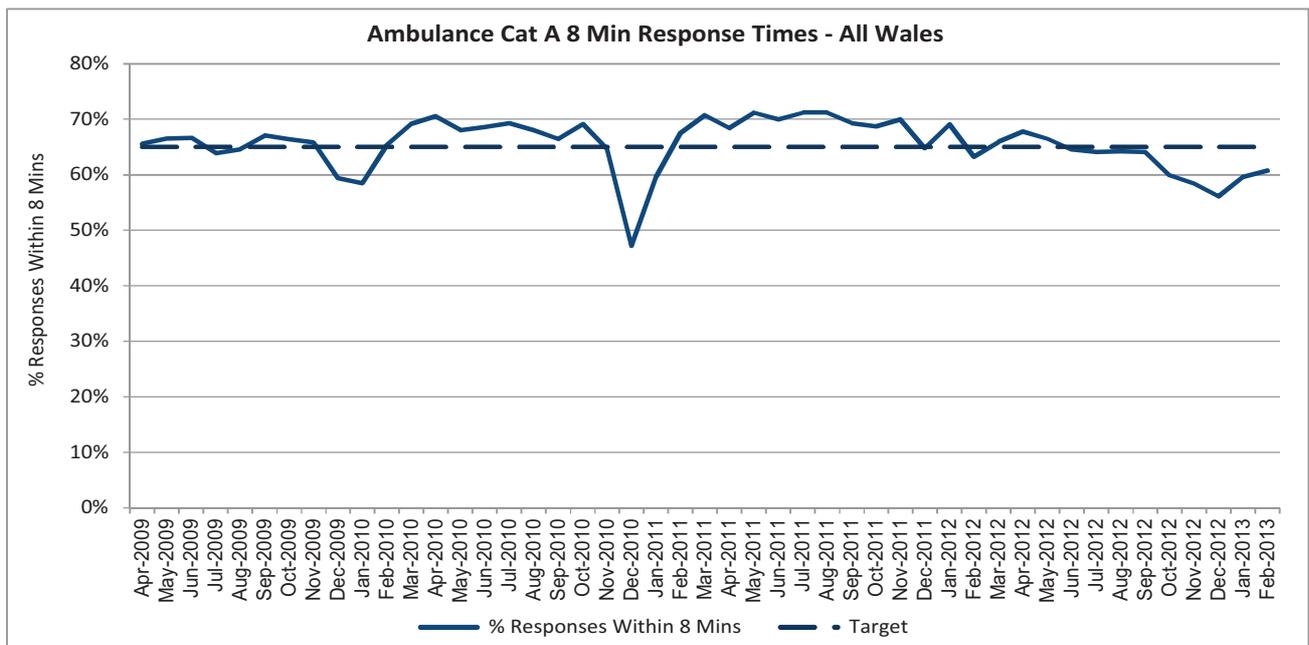
Performance against the eight minute target has deteriorated over 2012/13 as illustrated by chart 3.

Chart 3 WAST National A8 Performance (%) 2012/13 (Source: WAST)



This performance does not compare favourably with previous years as demonstrated by Chart 4 below.

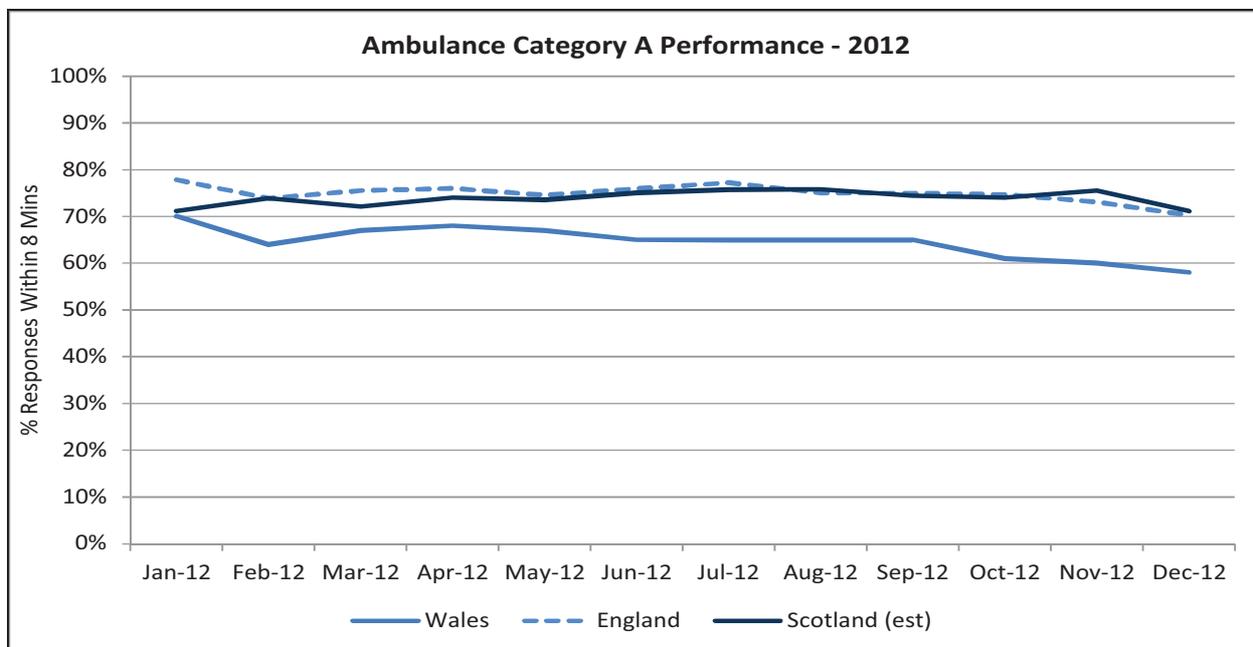
Chart 4 WAST National A8 Performance (%) 2009 – 2013 (Source: WAST)



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Performance in Wales does not compare favourably with England and Scotland either as illustrated by chart 5 below although it should be acknowledged that it is difficult to compare like with like with such a different level of resources at the command of ambulance service in each country.

Chart 5 **WAST Performance 2012** (Source: WAST)



WAST has also set itself a target of reaching 52% of patients categorised as suffering from cardiac arrest, with a defibrillator within four minutes. Between 2008-09 and 2011-12 the Trust had never met this target and the best annual performance was 35.6% in 2011-12. In November 2012 performance deteriorated to 25.8%.

Whilst the eight minute target has been viewed as the principal ambulance performance indicator there are a range of other standards which WAST has consistently failed to achieve. These include:

- For calls categorised as Green 1 and 2 the Welsh Government requires a paramedic to arrive at the scene within 30 minutes in 95% of cases. Between April 2012 and February 2013 performance has typically been around 80%.
- Calls classified as Green 3 do not receive a paramedic response. These calls are transferred to NHSDW for clinical telephone assessment and Welsh Government has set a target that the patient should receive this assessment within 10 minutes in 90% of cases. This target has not been met since March 2012.
- Urgent calls from GPs are the most common call received by the ambulance service in Wales. In such calls, the ambulance service uses a protocol known as *Card 35* which aims to ensure all calls from GPs are not treated with the

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same urgency. The ambulance call taker runs through a set of questions with the GP and together they decide upon an appropriate response time. The Welsh Government target requires WAST to comply with this agreed response time in 95% of cases. Between December 2011 and February 2013, WAST's best monthly performance was 69.7%.

Previous Reviews Findings on Performance

A number of the key reviews, including the *Ambulance Services in Wales* (2006) and *Lightfoot* Review identified the need for the ambulance service and LHBs to agree a range of measures and standards that can be used to benchmark performance against ambulance services around the UK. To date, there is little evidence of a robust system being put in place to achieve this.

The WAO *Ambulance Services in Wales Review* (2006) recommended that WAST should work with LHBs to improve the way they monitor their performance, through a robust, accurate and balanced system of measuring and reporting against key performance indicators. Although the Welsh Government revised the national reporting standards in 2011 there has been a lack of progress in regard to development of outcome measures to support the 65% national standard.

The same Review identified that rural areas of Wales pose their own unique challenges for delivering emergency ambulance services and suitable, regional strategies were required to address local issues, but which align with the national plan.

The *Lightfoot* Review identified that hospital delays have a significant impact on WAST's ability to meet its performance targets, suggesting that an additional 900 ambulance hours per week were needed in order to compensate for the delays in handing over patients at hospital. The number of lost ambulance hours accrued each week has remained constant since the release of the report with the latest available figures showing WAST 'lost' over 5000 hours waiting to handover patients at A&E in March 2013 alone.

The WAO's *Follow-up Review of Ambulance Services in Wales* (2008) suggested that LHBs should be more pro-active in tackling long patient handover delays which impinge on ambulance service performance.

Stakeholder and Focus Group Findings on Performance

Whilst some focus group members were of the view that time based targets were not appropriate, some thought that there was a role for time based targets as a measure of internal performance and improvement, and that these should not be made public. They felt the approach used by the Fire Service to monitor performance is effective as they have recently moved from a time-based response for emergencies to an approach based on outcomes and quality. This move came in

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response to a Welsh Government expectation that fire and rescue authorities will develop service standards for responding to dwelling fires in their area. An all-Wales Dwelling Fire Response Charter was developed to provide a framework by which all three fire and rescue authorities can communicate their specific commitments to their local communities.

The framework outlines the level of prevention, protection and response that communities can expect on dwelling fire risk and does not include time based targets, instead focusing on:

- Welsh Government performance indicators relating to fire deaths, injuries, accidental dwelling fires and home fire safety checks.
- Local performance indicators relating to operational competence levels of fire and rescue personnel.
- Local performance indicators relating to any serious injuries sustained by fire fighters at dwelling fires (under RIDDOR criteria).
- Local performance indicators relating to working time lost as a result of those injuries.
- Local performance indicators relating to response criteria (including response time) to dwelling fires.

Many stakeholders and focus groups believed that current targets were not regarded as effective and were not seen as clinically sensible, with a strong view that targets need to be outcome focused and shared with LHBs as part of an integrated pathway. Concerns were expressed by about the lack of an evidence base for an 8 minute target which was deemed to lack patient focus.

It was also suggested that consideration should be given to setting targets for key pathways, such as stroke and cardiac conditions, subject to more refined triage at the call handling stage.

The general view was that the current performance management framework within which WAST operates is resulting in some negative behaviour and is not assisted by the lack of consideration for outcome based measures such as patient survival.

The most consistent discussion topic from frontline staff was in relation to the disproportionate amount of focus placed on achievement of the eight minute target by management. Group members expressed concern that colleagues were complimented for achieving the target despite the eventual death of a patient but were reprimanded by managers for failing to achieve the target despite saving a patient's life.

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The following example was quoted by many stakeholders:

- If an ambulance arrives within 9 minutes and the patient survives, they have failed the target; and
- If an ambulance arrives within 7 minutes and the person dies, the target has been achieved.

In addition to the above, focus group members consistently pointed to the increase in demand as a factor in deteriorating performance. They felt failure to roster staff effectively to meet demand was also a contributing factor towards a failure to achieve the eight minute target.

Key Points

The eight minute target is currently the primary focus for performance management. This is a very limited way of judging and incentivising the performance of ambulance services.

Speed is particularly important for some conditions such as cardiac arrest but there is little clinical evidence for the blanket eight minute target.

A more intelligent suite of targets which incentivise change and provide a greater focus on patient experience and outcomes should be developed. These should form part of a suite of targets across the unscheduled care system

A clinical model for the ambulance service within the unscheduled care system requires the development of care pathways and protocols which facilitate the delivery of EMS within the unscheduled care system.

There is a lack of integrated data across the patient journey and specifically on outcomes, and this should be addressed to facilitate rigorous performance management across the system.

It was also felt that WAST was overused by the public and GPs in general. There were fears that the public appear to be relying on WAST when they are unable to get appointments at their local doctors and GPs are using WAST to transport patients to hospital when other options may be more appropriate. As a consequence of this conveyance levels are higher than they should be and WAST staff do not feel empowered to take decisions that will result in a patient not being transported to A&E.

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Some suggested more focus needs to be given to monitoring conveyance rates and the reasons for patients being transferred to hospital. As part of an effective performance management system, it was suggested by some that this could identify those who should have been treated elsewhere and take appropriate action to resolve poor practice among paramedics.

Many felt that improved access to an assessment and triage system through the primary and community care setting (i.e. GPs, Out of Hours and NHSDW) would reduce the demand on the ambulance service and improve performance.

A number of group members felt media scrutiny and political expectations were impinging on performance by increasing pressure on staff.

Part 3 - Key Conclusions and Recommendations

A New, Whole System Vision for Welsh Ambulance Services

The ambulance service and the wider NHS in Wales know they need to change.

The unscheduled care system needs to change how it identifies people at increased risk of a need for urgent or emergency care treatment, and to manage that risk with services, care and support at or close to home to prevent emergency hospital admissions where they are not needed.

The scale and pace of change will increase for NHS Wales over the coming years and this Review was undertaken in that context, with a focus on placing ambulance services within a whole system.

A new vision for Welsh ambulance services which is clearly defined, realistically achievable and aligned to the whole system direction of travel for unscheduled care services needs to be agreed as a first step. Everything else, including how services are planned, delivered and funded should flow from this vision.

A Robust, Clinical Model for Emergency Medical Services

WAST's current clinical strategy aims to build strong clinical leadership towards delivering a patient focused clinical service. This is a progressive and clear vision.

However, this clinical model cannot be delivered effectively unless efficiencies are made elsewhere allowing for the delivery of a streamlined EMS, which operates from a whole system perspective.

Realistic assessment of whether the current levels of clinical and nursing skills are able to provide an appropriate clinical response will also need to be made in building towards a truly clinical model.

Recommendation 1

Welsh Government and NHS Wales should agree that WAST Emergency Medical Services (EMS) be operated as a clinical service embedded in the unscheduled care system. This will need to be a key part of the service change agenda. Patient Care Services (PCS) should be locally responsive, cost effective and provided on clear eligibility and accessibility criteria.

Locally Provided and Cost Effective Patient Care Services

Careful consideration has been given to the findings of previous Reviews concerning aspects of PCS, specifically the *Griffiths Review of Non-Emergency Patient Transport in Wales* (2010) and the subsequent three-year national programme of non-emergency patient transport pilots.

Recommendations and conclusions made in this report should not preclude anything that will come out of the Griffiths Review which is due to report to the Minister for Health and Services with the outcome of the pilots in June 2013. However, the recommendation outlined below can be considered within a variety of organisational structures.

Ultimately the provision of PCS is a core part of service change proposals and it is important that these services are considered a high priority by whoever is responsible for their delivery, and to avoid the risk of being seen as marginal.

Further, in determining the future role for PCS, it is important to consider whether it fits with any changes to the way EMS are delivered and whether they should become a routine function of LHBs delivery of services.

Stakeholder views captured as part of the Review have indicated a clear preference for local delivery of PCS that would result in separation from EMS, allowing it to focus solely on the delivery of a clinical model.

This is also reflected in the international literature. In order to achieve this, PCS will need to be physically removed from the national emergency medical service and it is worth noting that there may be legal and workforce issues to contend with if this approach is taken.

Recommendation 2

Work should begin to disaggregate PCS from the EMS element of Welsh ambulance service delivery, with PCS becoming a routine function of Local Health Boards' (LHBs) business.

Consideration should be given to providing a form of national co-ordination to ensure the resilience and benchmarking of effective PCS across Wales.

NHS Direct Wales Should Continue to Provide Triage and Public Health Advice

NHSDW provides a 24 hour health advice and information telephone and web based service in addition to a nurse led clinical triage service for calls to 999 categorised as non-emergency nor urgent. The 'triage' and 'public health advice' are the principal elements of NHSDW's existing service.

Integration of NHSDW with EMS services enables a significant strategic advantage for the delivery of integrated urgent and emergency care services.

Paramedics and NHSDW nursing staff can work together within multi-disciplinary teams to provide patients with a wide range of clinical advice, guidance and treatment. Further, the nursing workforce play a pivotal role in identification of different needs of the public, provide evidence based support and information to enable self care as a result of telephone consultation or web-based services.

There are various options in terms of where the functions of NHSDW should sit. The Public Health "advice" function could be provided by a different organisation (for example Public Health Wales) or could build upon LHB developments in providing phone and web based advice.

However, there is emerging work regarding patient access to initial "telephone triage" support which may involve the establishment and integration of the 111 non-emergency number and Communications Hubs.

NHSDW and the services it offers are a core part of this emerging work and it would not be appropriate to make recommendations on its function within this evolving policy context.

It is important to note, though, that while the two main functional elements of NHSDW can theoretically be disaggregated, they are part of an overarching, integrated service and this presents challenges, particularly in terms of human resources and how to best use the skills of these staff in the future.

Further, and similarly to the future options for the delivery of PCS, any changes to the delivery of NHSDW functions are also dependent on the service delivery model for EMS.

Recommendation 3

The future delivery model for NHS Direct Wales (NHSDW) should be further considered within the context of the options for changes in structure and accountability for the ambulance service. The wider context of the development of the 111 non-emergency number and other advice services also needs to be considered.

Funding and Accountability Arrangements Must Change

There are compelling arguments for change based on stakeholder feedback, the available literature and analysis of a significant number of previous reviews, which itself is symptomatic of a need for change.

The existing funding mechanism is complex, opaque and time consuming, and does not allow Welsh ambulance services to match aims and objectives for their delivery.

Decisions are required about the future structure and model of ambulance service delivery in Wales.

The complexity of funding arrangements is exacerbated by weak commissioning arrangements with an apparent absence of service specification for national ambulance standards which set out the quality of service required.

There is also no evidence of development of SLAs or frameworks for required activity levels during any given financial year, resulting in a lack of direction to WAST regarding the shape of current and future services at a commissioning level.

Further, the apparent absence of commissioning arrangements has hindered accountability and governance structures.

Performance management arrangements also require fundamental improvement under a more robust commissioning structure with evidence suggesting there have been infrequent performance meetings held between WAST and WHSSC over the past three years, with no evidence of a planned timetable in place for meetings between the two organisations.

During the Review it has become clear that 'doing nothing' is not an option, with the evidence identified suggesting there are real problems around accountability, delivery and morale.

Any proposed structure should, therefore, be assessed against the following guiding principles, and whether it will:

- Reflect current organisational responsibilities for the delivery of population based services;
- Be based on and incentivise the delivery of a Clinical Model;
- Have simple and transparent accountability;
- Fit within delivery of a wider Unscheduled Care pathway;

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- Place the management of financial risk in the most appropriate place;
- Fit with wider strategies within Health and Wellbeing in Wales;
- Be resilient, nationally and locally;
- Facilitate a local focus by working with local partnerships; and
- Provide enough recognisable change from the current arrangements;

Recommendation 4

The fundamental problem with the non-alignment of current accountability, funding and governance arrangements for ambulance services in Wales needs to be addressed.

There are also deep rooted problems with WAST itself and issues also persist in WAST's relationship with partners. Both of these issues need to be addressed.

Options for Changing the Strategic Model for Welsh Emergency Medical Services

A number of strategic models capable of delivering a robust, clinical model for EMS were considered, and three models have been identified as viable options.

International research suggests there is little evidence to support the merger of emergency services (see page 33) and the number of disadvantages associated with this strategic model outweighed advantages by some distance.

International research also suggests the general direction of travel is towards larger organisations of ambulance services, and both the Scottish and Northern Ireland ambulance services are nationally organised.

However, as previously alluded to, maintaining the current arrangements should not be viewed as a viable option in view of the longstanding problems with funding, accountability, governance and the culture within the organisation.

There are three distinct strategic models which would address these main challenges and all models have advantages and disadvantages that need to be considered against the guiding principles outlined on page 62.

OPTION 1: A “Special Health Board” Model

This model would involve retaining national service provision, delivered by a to-be-established Special Health Board, that would be funded and performance managed directly by the Welsh Government.

The Special Health Board could have a role in the process of national Government, but would not act as a Government department or part of one, and which accordingly operates to a greater or lesser extent at arm's length from Ministers.

In simple terms, this would mean ambulance services could be delivered by a national or regional public body, carrying out its day-to-day functions independently of Ministers, but for which Ministers are ultimately accountable.

This approach would see the dissolution of WAST in its current guise as a Trust and a provider of health services on behalf of LHBs and the establishment of a Special Health Board, a deliverer of services in its own right on a national basis with all the equal and comparable organisational arrangements held by the Health Boards.

In theory there would be parity in negotiations and transactions similar to the specialist tertiary services mechanisms currently in existence between LHBs for services such as cardiac and neurological surgery.

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This would alter the current commissioner / provider relationship, and although tertiary arrangements are not as mature as required it would represent a familiar ground to both LHBs and a new Special Health Board.

Essentially this option would seek to place ambulance services on the same footing as Health Boards with the same funding, performance and accountability mechanisms and expectations.

Advantages

- This model will retain a national organisation and will, therefore, be resilient and flexible in terms of logistical delivery and redeployment of resources to match changes in demand / situations.
- The direct reporting to Welsh Government will provide simple and transparent accountability that matches the way the funding is provided.
- Current arrangements for call management, control rooms and deployment would provide continuity of core services.
- Retaining a national organisation will be relatively quick and straightforward to implement.

Disadvantages

- Whilst a national organisation might deliver logistical benefits, it has struggled to implement the change to a more clinically focused delivery model. There is currently a strategic shift towards retaining accountability for delivery of Health services within the NHS, and therefore placing accountability with WG seems to go against this, and the management of the financial risk would not be well-placed within WG.
- Unscheduled care pathways are being developed locally, and a national service may not have the local focus to be fully integrated within these.
- Retaining a national service may not deliver sufficient change, both real and perceived, in terms of improving working practices and culture, and the extent to which the Review is seen as worthwhile.
- A new Special Health Board would need to be created. WG don't necessarily have the planning and managing skills that would provide an effective relationship with an ambulance service.

OPTION 2: Commissioning Model

WAST is currently engaged as a provider with its partners and suppliers, although the arrangements are fundamentally flawed. There are no tangible contracts or SLAs in existence which ensure demand for services are understood, benchmarked and planned as part of partnerships with WHSSC and Health Boards.

Further, the current arrangements are blurred with an apparent absence of accountability for ensuring resources are matched to demand effectively, and there are limited performance management arrangements in place to act as a performance improvement enabler.

If the preferred model for the delivery of EMS is a commissioner/provider relationship with LHBs it is essential that any new arrangement is different to what has gone before thus ensuring effective use of resources that have a whole system health economic benefit.

This will involve working together at the highest level within each organisation to sustain and improve provision that meets the changing needs of both the population and the health economy. This will require commissioners and the provider to engage in regular, constructive performance discussions to ensure continuous service improvements.

Effective commissioning will move the emphasis from spending on services to investing in health and well-being outcomes. It is crucial that agreed objectives meet the needs of the whole health economy and are developed within an environment of clinical engagement.

Service delivery plans will need to be developed at an all Wales level in the first instance but with the flexibility to deliver local needs. The local delivery plans must work in conjunction with the national plan and have no detrimental impact to any individual partner or the all Wales plan.

To facilitate the system benefits as outlined, the following process would need to be in place:

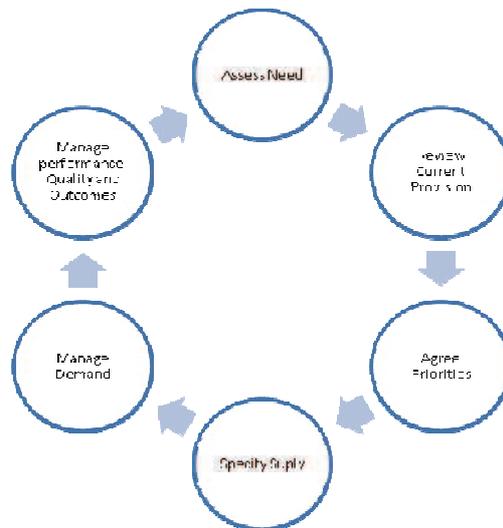
- Agree service model for EMS and NHSDW with all commissioners;
- Sign-up to the principle of a clinical ambulance service able to deliver an integral clinical service;
- Sign-up to LHB responsibility as both a commissioner and a provider;
- Agree a medium term service and financial framework that links to WG standards and targets;
- Recognises the 7 LHB strategic needs assessment;
- Agree tolerances around handover delays and financial consequences; and

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- Commissioning must be directly with a LHB(s) as the current arrangement with WHSSC has proved unsuccessful, in part because WHSSC is so far removed from unscheduled care.

Figure 9 demonstrates the commissioning cycle required to optimise value for the whole health economy.

Figure 11 Optimal Commissioning Cycle



This model would need to ensure that funding, accountability and performance management are an integral part of the commissioning framework and various combinations of commissioners may be considered further under this option at a local, regional and national level.

Finally, implementing this option would mean WAST itself would no longer act as a Trust as defined by the NHS (Wales) Act 2009. A new organisation would be formed without accountabilities to government although retaining similar status to Trusts. The new organisation would essentially act as a type of Executive Agency which will remain within NHS Wales.

Advantages

- This model will have the benefits of delivering the service through a national organisation with the added benefits of creating a local focus and would be easiest to transition to.
- A strong commissioning framework will put in place simple and transparent accountability that should drive forward improved delivery in terms of performance and efficiencies.
- The local focus will fit with the development of Unscheduled Care pathways and partnership working.

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- Financial risk would be appropriately managed within the NHS. Having a stronger regional identity would highlight areas where performance needed to improve.
- Greater consistency and fairness in patient access to emergency ambulance services to Welsh patients.
- Better health outcomes for patients through empowering ambulance services to deliver high quality, clinically-effective, evidence-based services which deliver far more than a 'scoop and run' service for life threatened patients.
- Greater efficiencies in the delivery of ambulance services through the introduction of standardised frameworks and operating procedures.

Disadvantages

- There is currently a low supply of commissioning skills and experience within Wales and restricted levers to ensure effective commissioning.
- Whilst a national organisation might deliver logistical benefits, it has struggled to implement the change to a more clinically focused delivery model.
- There will potentially be increased transactional costs associated with the commissioning process.
- There is currently a strategic shift towards retaining accountability for delivery of health services within the NHS, and therefore placing accountability with Welsh Government seems to go against this, and the management of the financial risk would not be well-placed within Welsh Government.
- Retaining a national service may not deliver sufficient change, both real and perceived, in terms of improving working practices and culture, and the extent to which the Review is seen as worthwhile.



OPTION 3: Local Management and Delivery Model

This model would see the dissolution of WAST as a Trust and move EMS and PCS services from an all-Wales delivery model and place responsibility for them with the seven LHBs.

LHBs would have a statutory responsibility for planning, designing, developing and securing EMS and PCS services in addition to their existing responsibilities for primary, community and secondary care health services, including mental health and specialist tertiary services, for their local populations. This would also include taking a strategic approach to developing ambulance service workforce and estate matters.

The ambulance services provided by each LHB will need to meet local needs and be delivered within the national policy and framework set out by the Minister for Health and Social Services and the Welsh Government. This will include meeting the locally defined targets as set out by the Welsh Government. Ambulance services would be provided on the same basis as all other services as part of the routine funding and delivery functions of a LHB. A national co-ordination mechanism will need to be established:

- to provide a platform for identifying and articulating local priorities, challenges and best practice to eradicate any barriers that may be presented by cross border issues;
- To determine research priorities, facilitate research work and use findings to inform policy reform and new developments; and
- To mobilise financial and technical resources from all stakeholders and solicit their support in implementation, monitoring and evaluation processes.

Advantages

- This would be a significant change, both real and perceived, in terms of the way the ambulance service is delivered;
- There would be complete local focus and integration with development of unscheduled care pathways, through the clinical role that the ambulance service would provide.
- There would be no need for a separate Board, and all accountability would sit with the LHB within their role of providing a health service to their local population, and is therefore simple and transparent.
- There would be reduced transactional costs and levers for change would be consistent with those for the rest of the NHS Wales system.
- Perceived “competition” in terms of performance between LHBs may improve overall performance.

- The ambulance workforce would be fully integrated within the LHB and therefore perceived entrenched poor culture and working practises would be dissipated.
- This model would facilitate better working with local partnerships and act as a driver for greater involvement for ambulance services to be involved with service development at a local level.

Disadvantages

- WAST would need to be dissolved, and its workforce reallocated to LHBs. This may have legal implications and would not be quick or straightforward to implement.
- There would be potentially reduced economies of scale or critical mass across an ambulance service which may lead to poor resilience and non-flexibility in terms of reallocating resources to suit delivery requirements, and create cross boundary issues.
- There would be potential for inconsistency in practice and delivery across LHBs.
- Provision of call taking control rooms and despatch functions would need to be fully examined to understand the implications in terms of both expertise and cost.
- Responsibility for delivery of NHSDW functions would need to be considered in the context of emerging work programmes, in regard to legality around workforce changes and in regard to the triage function currently provided.
- The role and clinical skills of the ambulance service may not be clearly understood by LHBs, particularly in relation to the skills, competences and clinical scope of practice.

It is important to note that there are a range of organisational permutations for both option 2 and 3. These options, and their advantages and disadvantages would need to be considered in more detail once a direction of travel has been determined.

Recommendation 5

Three main structural options should be considered for the future delivery of EMS: 'Strategic Health Board' Model, LHB Commissioning Model and the LHB Management and Delivery Model. Options should be assessed against a series of core guiding principles to ensure form follows function and a clear decision made on the future direction of travel.

A Robust, Clinical Model Requires a Highly Skilled and Committed Specialist Workforce

Fundamental changes are required to promote relevant training and education programmes to better equip staff to provide an enhanced range of clinical services. Developing and improving clinical competence among front line staff to allow increased treat and referral rates are paramount to the development of a robust clinical model.

Frontline staff need to be up skilled to have the clinical confidence to reduce the number of patients transported to hospital inappropriately, and ensure they are seen by the most appropriate clinician or service for their needs.

The clinical development within WAST has advanced over recent years through the Advanced Practitioner Paramedic (APP) role and the specialist care at a scene or at a patient's home it offers.

However, it has been difficult to attract candidates to study for the qualification and more needs to be done to design and deliver educational and training programmes in collaboration with higher education organisations.

Recommendation 6

Robust workforce planning should be put in place to deliver an up skilled and modernised EMS workforce enabling greater levels of autonomy and clinical decision making. This should be developed in partnership with the NHS, Higher Education Institutions and Regulatory Organisations.

Recommendation 7

Care Pathways and protocols should be further developed across the unscheduled care system to allow patients to be treated at the right time and in the right place and reduce unnecessary pressure on A&E. There are considerable benefits associated with alternative care pathways not least for patients and all parties should work together to accelerate their development as a priority.

Performance Measures Need to Go Beyond Speed Based Targets

A case can be made for a new all-Wales target for the time taken for an ambulance response in cases where a patient needs transport. There is no clinical evidence to suggest an eight minute response makes any difference to the outcome of the patient in all circumstances.

Further, the current target for 60/65% of responses means that there is an “allowable” 40/35% tolerance to responses that are outside of this target (not taking into account appropriateness of response). It is also important to understand the factors influencing performance against time targets, for instance rurality, and other influences within the unscheduled care system.

However, setting different targets by LHB is not tenable because of operational considerations, unless such targets are constructed on an all-Wales basis and reflect the logistical issues in responding to rural as opposed to urban areas (e.g. Scotland differentiates targets by LHB density).

There is evidence that a quicker response can make a big difference to patients with acute clinical conditions such as cardiac, stroke and trauma although future measures should also relate to the outcome of the patient’s care. International evidence suggests early access to emergency care for patients who have suffered cardiac arrest, known as the ‘Chain of Survival’, increases opportunity for survival.

The American Heart Association suggests that each of the following four links must be put into motion within the first few minutes of cardiac arrest to provide the best opportunity for survival

- Early Access to Emergency Care must be provided by calling 999;
- Early CPR should be started and maintained until EMS arrive; and
- Early Defibrillation is the only one that can re-start the heart function of a person with ventricular fibrillation (VF). If an automated external defibrillator (AED) is available, a trained operator should administer defibrillation as quickly as possible until EMS personnel arrive.

For the Chain to be effective, quick execution of each and every link is critical. With each minute that passes, the likelihood of survival decreases 7-10%.

WAST has set itself an internal target of reaching 52% of patients categorised as having suffered cardiac arrest with a defibrillator within four minutes. However, performance against this internal target has at times deteriorated to as low as 25%. Consideration should be given to supplementing a cardiac target with further in-hospital and post-hospital measures to reflect the whole patient pathway and provide essential patient outcome information.

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Further work should also be carried out on developing a suite of appropriate measures that are outcome-focused and reflect the clinical vision for ambulance services in Wales. This reflects the international direction of travel for measuring the quality of ambulance service delivery. Time critical conditions such as stroke and fractured neck of femur should be considered for pathway long outcome measures using *1000 Lives plus* methodology.

There is an opportunity to include incentive based targets – i.e. targets designed to act as a lever to incentivise secondary solutions, which act to improve performance across the system - such as a target around the proportion of ambulance responses that result in patients being transported to A&E.

A non-conveyance rate target would encourage cross unscheduled care organisation exploration of alternative pathways for more appropriate treatment to callers needs. It may also increase use of on-scene assessment in place of automatic conveyance to Emergency Departments.

Recommendation 8

The Welsh Government should consider moving from a primary focus on the eight minute response time standard to a more intelligent suite of targets and standards which work across the whole unscheduled care system. This should include a greater emphasis on patient outcomes and experience. The Welsh Government’s recently formed Measures Group could provide an opportunity to establish this suite of measures recognising the co-dependencies across the system.

Recommendation 9

Consideration should be given to developing speed based standards in areas where the clinical evidence demonstrates a clear impact on outcomes for example in formalising the standard for four minute responses to calls categorised as cardiac arrest and publishing it on a monthly basis to encourage improvement. Consideration should be given to developing a wider threshold analysis of the eight minute target.

Recommendation 10

Consideration should be given to introducing incentive based targets for example a non-conveyance or appropriate rate target to incentivise greater development and use of alternative pathways and reduction in inappropriate conveyance of patients to A&E.

Recommendation 11

More joined up and granular data is required across the patient journey through primary, community, acute and social care. This could also be taken forward by the Welsh Government Measures Group.

Next Steps: Achieving the Vision

The scale of the challenges facing NHS Wales and the Welsh Government to create a high quality and robust clinical model for EMS in Wales will take time but is achievable. Embedding ambulance services as an integral part of the whole unscheduled care system will require clearly defined funding, accountability and governance lines, aligned with improved planning at a local and national level.

Further, considerations need to be made about the future role of PCS, whether it fits with any changes to the way EMS are delivered and whether they should become a routine function of Health Boards delivery of services.

It is important for the Minister to make a decision on the future strategic and structural route map for ambulance services to address the fundamental issues.

Making a timely decision is important, as is the involvement of key stakeholders in co-creating the details of the direction of travel. Once a decision is made about the future strategic and structural model for ambulance services, all stakeholders must work together and act quickly to agree how the vision can be achieved, to re-shape pre-hospital care and move towards enabling the delivery of high quality ambulance services in Wales.

It is likely that a work programme will need to be put in place immediately to shape the changes required to deliver the changes in structure and this will require robust management and clear timescales to ensure the pace of change is maintained and the desired improvements are achieved as quickly as possible.

Any decisions made about the strategic and structural delivery of ambulance services may result in a period of consultation and discussions about legal issues. A sub group of the National Urgent and Emergency Care Board may need to be established to oversee the implementation of a new strategic model, to consult on the Review findings and implement an associated action plan.

It is imperative that resilient, well defined and agreed arrangements are put in place to ensure continuity of clinically safe ambulance services during any transitional period. LHBs and WAST will need to show strong leadership at all levels and Welsh Government will need to clearly define its expectations of organisations and services throughout this period.

Recommendation 12

Consideration should be given to making a clear decision on the future structural model accompanied by a robust time-bound work plan for taking that forward. This should be taken forward and co-created with key stakeholders.

Conclusion

Ultimately, there are three components which need to be addressed to deliver high quality ambulance services.

Agreeing a clear vision for ambulance services is fundamental. Future developments resulting from this Review, including how services are planned, delivered and funded should flow from this vision. EMS should be a clinical service that is embedded within the wider unscheduled care system and delivered by staff with the appropriate clinical skills.

To deliver the vision, the most suitable structural model for ambulance services in Wales needs to be determined. While there is no 'magic bullet' that will resolve the current funding and accountability challenges, consideration should be given to how best to develop the structural model, working with key stakeholders. These new arrangements should then be allowed to mature

Finally, ambulance services need to play a key role in the shaping of future models of service delivery, and it is vital that they are considered as part of the wider context of any plans for service change for NHS Wales.

Appendix 1 – Terms of Reference

A Review of Welsh Ambulance Services

Terms of Reference

1. Background

1.1 On 7 November 2012 I announced my intention to commission a comprehensive review of the Welsh Ambulance Services Trust (WAST). This review will make recommendations to enable high quality, sustainable ambulance services.

2. Current position

2.1 The Welsh Ambulance Services Trust provides a national service for both emergency responses and non-emergency patient transport, and is responsible for the services provided by NHS Direct Wales.

2.2 The Trust is funded by Local Health Boards (LHBs) via the Welsh Health Specialised Service Committee (WHSSC) who agree service requirements for LHB areas. It is formally accountable for the delivery of services to the Welsh Government.

3. Areas of Focus within the Review

3.1 Relationships with Local Health Boards

The review will appraise the current arrangements whereby Health Boards, through WHSSC, provide funding to WAST to ensure Welsh Government standards and targets are met. The effectiveness of these arrangements will be assessed as will possible alternative funding models.

3.2 Organisational Structure

The review will appraise the current arrangements – an all Wales organisation providing all aspects of Ambulance Services and NHS Direct Wales. It will consider and assess alternative structural models. These options will take account of a number of factors including:

- Geography;
- Relationship between emergency and non-emergency services;
- Position of NHS Direct Wales; and
- Relationship with relevant NHS services provided by NHS Health Boards.

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3.3 Performance

It is assumed the Trust will continue to be accountable to the Welsh Government for its performance. The review will appraise the current Standards and targets which apply to the Ambulance Service and consider options for improvement.

4. Process

4.1 The Review will:

- Consider relevant previous external and internal reviews of the Welsh Ambulance Service Trust;
- Engage extensively with WAST staff;
- Engage with LHBS;
- Engage with relevant stakeholders; and
- Take account of relevant good practice in other health systems

5. Timeframes

5.1 It is intended the initial report will be completed within ten weeks and start in January 2013.

6. Chair Person

6.1 The review will be Chaired by Professor Siobhan McClelland. Professor McClelland is a respected academic with a strong interest in health matters in Wales.

7. Welsh Government Role

7.1 Welsh Government officials will facilitate and support Professor McClelland during the course of the review by:

- Providing supporting materials and background information;
- Providing contact details for stakeholders to be contacted during the scoping phase;
- Organising meetings as appropriate; and
- Organising the presentation of the results to the Minister, Welsh Government officials and key stakeholders;

7.2 Full details will be agreed with Professor McClelland prior to the beginning of the review.

8. Outputs

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8.1 The Report will be provided to the Minister for Health and Social Services and will make recommendations relating to the areas of focus in 3 above.



Appendix 2 – List of Previous Reviews and Other Reference Documents

Doc Number	Review Title/Date	Owner
1	Ambulance Services in Wales Review / 2006	WAO
2	Special Assurance Review / 2007	HIW
3	Review of WAST's Emergency response Service / May 2008	WAST CHAIR
4	Follow up Review – Ambulance Services in Wales / 24 June 2008	WAO
5	Ambulance Services in Wales – WAO Further Update to NAWAC / October 2008	NAWAC
6	Unscheduled Care – Patient Handovers at Hospital Emergency Departments / April 2009	WAO
7	NAW, Audit Committee, Ambulance Services in Wales Inquiry / July 2009	NAWAC
8	Lightfoot Efficiency Review / 2009	WAST/HCW
9	Procurement Review: Tender 0212 (Welsh Ambulance Services NHS Trust) / January 2012	WAO
10.1	ORH Reviews (2 separate reviews) / 01 November 2012 Review of Control	ORH / WAST

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Doc Number	Review Title/Date	Owner
10.2	Operational and Capacity review / 01 November 2012	ORH / WAST
11	NHS Direct Wales / 15 September 2009	WAO
12	The Griffiths' Review – Non Emergency Patient Transport in Wales – April 2010	Win Griffiths Chair ABMULHB

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Appendix 3 – References Section

WAST Annual Report 2011/12 (2012)

NHS in Wales - Why We Are Changing the Structure (2009)

Together for Health (2012)

Designed to Improve Health and the Management of Chronic Conditions in Wales: An Integrated Model and Framework (2011)

Delivering Emergency Care Services (DECS) Strategy (2008)

Terms of Reference, Unscheduled Care Programme Board (2010)

Unscheduled Care: a Whole Systems Approach (2009)

Emergency Services Review: A comparative review of international Ambulance Service best practice (2009)

Department of Health 'Taking Healthcare to the Patient (2005)

National Ambulance Commissioners Group/NHS Confederation Briefing November (2012)

Transforming NHS Ambulance Services (2009)

Delivering safe, effective, person centred care: Scottish Ambulance Services Annual Report and Accounts 2011/12 (2012)

Working Together for Better Patient Care 2010-15 (2010)

NHS (Wales) Act 2009

Appendix 4 - List of Stakeholders

Name	Role	Organisation
Elwyn Price-Morris	CEO	WAST
Stuart Fletcher	Chair	WAST
	Director of Strategy, Planning and Performance	WAST
Sara Jones Aileen Evans	Nurse Director & Assistant Nurse Director Medical & Clinical Services Directorate Central & West Region	WAST
Paul Hughes	Medical Director	WAST
Sue Jenkins	Director of Service	WAST
Carl James	Director of Strategy and Delivery	WAST
David Sissling	Chief Executive NHS / Director General , Department of Health and Social Services	Welsh Government
Kevin Flynn	Director of Delivery, Department of Health and Social Services	Welsh Government
Andrew Goodall	Chief Executive	Aneurin Bevan HB
Paul Roberts	Chief Executive	Abertawe Bro Morgann UHB
Mary Burrows	Chief Executive	Betsi Cadwaladr UHB
Adam Cairns	Chief Executive	Cardiff & Vale UHB
Allison Williams	Chief Executive	Cwm Taf HB
Trevor Purt	Chief Executive	Hywel Dda HB
Andrew Cotto	Interim Chief Exec	Powys tHB
Simon Dean	Chief Executive	Velindre NHS Trust

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Name	Role	Organisation
Dr Alan Willson	Director of Research and Development and Joint Director	NLIAH
Bob Hudson	Chief Executive	Public Health Wales NHS Trust
Susan Thompson	Project Lead	Non Emergency Patient Transport Pilot Projects / Griffiths Review
Jan Williams	Chair	Wellbeing Best Practice & Innovation Board (sponsored by PHW)
Stuart Davies	Head	WHSCC
Dan Phillips		WHSCC
Stephen Harray		WHSCC
Dr Chris Jones	Chair	Cwm Taf
Andy Richards	Regional Campaigns & Communications Co-ordinator	UNITE Unite the Union, 19 High St, Swansea SA1 1LF
Dawn Bowden Darren Dupre	Head of Health Cymru	Health Cymru (UNISON) RCN Wales Ty Maeth, King George V Drive East Cardiff CF14 4XZ
Dr Richard Lewis	Welsh Secretary of BMA Cymru Wales	BMA
Adrian Hughes	Chief Executive	Retained Firefighters Union
Darren Millar	Health Lead	Conservative
Elin Jones	Health Lead	Plaid Cymru
Kirsty Williams	Health Lead	Liberal Democrats
Mark Drakeford	Health Lead	Labour
Peter Bradley,	Chief Executive, St. Johns, New Zealand	UK Ambulance expert and advisor to UK government
Pauline Howie,	Chief Executive	Scottish Ambulance Service
Ian Williamson		Health Dept, Scottish Government
Julie McIlroy	Dep. Performance Manager:	

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Name	Role	Organisation
Liam McIvor,	Chief Executive	Northern Ireland Ambulance Service
Anthony Marsh		West Midlands Ambulance Trust
Professor Matthew Cooke		DH Advisor
Robert Morton		National Ambulance Service, Ireland (Based in Kildare, Mid-Ireland)
Anthony Marsh	Chairman and Chief Executive of West Midlands Ambulance Service NHS Trust	- West Midlands Ambulance Service NHS Trust
Della Cannings QPM	Director and Chair of Yorkshire Ambulance Service NHS Trust	- Yorkshire Ambulance Service NHS Trust
Michael Dinan	Director and Director of Finance of London Ambulance Service NHS Trust	- London Ambulance - Service NHS Trust
Ken Wenman	Director and Chief Executive at South Western Ambulance Service NHS FT and Interim Chief Executive at Great Western Ambulance Service NHS Trust	- Great Western Ambulance Service NHS Trust
Hayden Newton	Director and Chief Executive at East of England Ambulance Service NHS Trust	- East of England Ambulance Service NHS Trust
Steve Irving	Temporary Lead and Executive Staff Officer of London Ambulance Service NHS Trust	- London Ambulance Service NHS Trust
Martyn Salter	Finance Manager at AACE	- AACE
Louise Wilson	Programme Manager at AACE	- AACE
Helen Medlock,	Chair	Ambulance Commissioning Group

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		(based in Kent)
Name	Role	Organisation
Steve Thomas CBE, CE		WLGA
Gabe Conlan and Phil Evans		Social Services
Stephen Allen		Cardiff and Vale of Glamorgan Community Health Council
Richard Smith	Mid and West Wales	Fire
Huw Jakeway	Fire & Rescue Service, South Wales	Fire
Simon Smith,	North Wales,	Fire
Jackie Roberts,	Chief Constable, Dyfed Powys Police & Chair JESG	Police
Mark Polin	Chief Constable - N Wales Police	Police
Carol Lamyman-Davies Andrea Matthews		CHCs
Sir Paul Williams OBE, DL	Trustee	WRVS - Women's Royal Voluntary Service
Graham Benefield		Welsh Voluntary Council in Wales
David Heyburn	Manager, Welsh Renal Clinical Network	Renal Network
Angela Hughes	Chief Executive	Welsh Air Ambulance
Peter Hollins	Chief Executive	British Heart Foundation
Keith Dunn	Chief Executive	St John
Peter Thomas	Aneurin Bevan HB	Medical clinician
Grant Robinson	Aneurin Bevan HB	Medical clinician
Mark Poulden	Abertawe Bro Morgannwg UHB	Medical clinician
Dr Sarah Spencer	Abertawe Bro Morgannwg UHB	Medical clinician
Aruni Sen	Betsi Cadwaladr UHB	Medical clinician

A Strategic Review of Welsh Ambulance Services

Nigel Davies	Senior Service Manager	British Red Cross
Name	Role	Organisation
Charlotte Jones	Deputy Chair	General Practitioners Group
Brian Foley	Adviser	Community First Responder, Barry (Jane Hutt's Constituency)
Dr Pauline Griffiths		College of Human & Health Sciences
Frank Mansell	Patient Safety	NLIAH
Kate Chamberlain		HIW
Dave Thomas	Director of Health & Social Care	Wales Audit Office
Emma Logan		First Responder based at Welsh Government Office, Llandudno Junction
Donna Mead		University of South Wales

P-04-451 : Achub Gwasanaethau Ysbyty Brenhinol Morgannwg

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i achub ein gwasanaethau iechyd yn Ysbyty Brenhinol Morgannwg

Mae penderfyniad yn cael ei wneud a fydd, os caiff ei roi ar waith, yn arwain at golli rhai agweddau ar ofal pediatrig, obstetreg, newydd-anedig a damweiniau ac achosion brys. Yn syml, os oes angen gofal dwys arnoch, os oes gennych blentyn sâl neu os ydych yn debygol o gael beichiogrwydd a allai fod yn gymhleth, bydd rhaid i chi deithio i Gaerdydd, Merthyr neu Benty-bont ar Ogwr. I breswylwyr Rhondda Cynon Taf sy'n dibynnu ar drafnidiaeth gyhoeddus, gallai hyn olygu teithio am dros ddwy awr i fynd i apwyntiadau hanfodol. Mae preswylwyr Rhondda Cynon Taf sydd wedi llofnodi isod yn cefnogi'n gryf opsiwn 5.2 o dan y cynigion a amlinellwyd yn y ddogfen ymgynghori ar gyfer ad-drefnu gwasanaethau iechyd, "Gwneud Cystal â Goreuon y Byd — yr Heriau sy'n Wynebu Gwasanaethau Ysbyty yn Ne Cymru". Rydym hefyd yn cefnogi'r galw i gadw a datblygu cyfleusterau a gwasanaethau Ysbyty Brenhinol Morgannwg i sicrhau bod pobl Rhondda Cynon Taf yn gallu derbyn a chael gafael ar y gwasanaethau y maent yn eu haeddu o fewn ffiniau'r sir.

Prif ddeisebydd: Cyng. Mark Adams

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 29 Ionawr 2013

Nifer y llofnodion: 1077

MS
KO.



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd
Cwm Taf
Health Board

Your ref/eich cyf:
Our ref/ein cyf: AW/KB
Date/Dyddiad: 19 April 2013
Tel/ffôn: 01443 744800
Fax/ffacs:
Email/ebost: Allison.Williams4@wales.nhs.uk
Dept/adran: Chief Executive

William Powell AM
National Assembly for Wales
Cardiff Bay
Cardiff
CF99 1NA

Dear William,

I refer to your letter dated 8 April 2013 regarding the petition linked to service reconfiguration within Cwm Taf and confirm that this has already been considered as part of the response to the engagement phase of the process and that it will also be considered as part of the final consultation.

Yours sincerely

Mrs Allison Williams
Chief Executive/Prif Weithredydd
Cwm Taf Health Board/ Bwrdd Iechyd Cwm Taf

P-04-456: Dementia – Gallai hyn ddigwydd i chi

Geiriad y ddeiseb:

Rydym ni, sydd wedi llofnodi isod, yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru:

i. I roi terfyn ar wahaniaethu yn erbyn dioddefwyr dementia yng Nghymru sy'n gwneud cais am Arian Gofal Parhaus y GIG, drwy ganiatáu i'r categori gwybyddiaeth o angen (a elwir yn barth) godi i lefel Difrifol yn y fersiwn Gymraeg o'r Offeryn Gwneud Penderfyniadau. Byddai hyn yn ei gwneud yn gydnaws â'r fersiwn Saesneg; a

ii. Bod Byrddau Iechyd Lleol uniongyrchol yn gweithredu'r Fframwaith Cenedlaethol ar gyfer Arian Gofal Parhaus y GIG, yn gywir, o ran cymhwysedd cleifion a heb ystyried cyfyngiadau cyllidebol.

Prif ddeisebydd: Helen Jones

Ysytirwyd am y tro cyntaf gan y Pwyllgor: 19 Chwefror 2013

Nifer y llofnodion: 1413

Lesley Griffiths AC / AM
Y Gweinidog Iechyd a Gwasanaethau Cymdeithasol
Minister for Health and Social Services



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-456
Ein cyf/Our ref LG/00995/13

William Powell AM
Chair
Petitions Committee

Naomi.stocks@wales.gov.uk

13 March 2013

Dear Bill

Thank you for your letter of 27 February following a petition from Helen Jones regarding the provision for Dementia sufferers in Wales.

The responsibilities of Health Boards regarding Continuing NHS Healthcare are set out in the 2010 National Framework for Implementation in Wales. This Framework sets out the requirements to undertake assessments in a timely manner. It is designed to ensure the individual and their family/carers are appropriately engaged in the process, with their views properly captured and considered.

The Decision Support Tool (DST), although not an assessment in itself, captures and collates information from a range of assessments into one document to support decision making. It outlines the levels of care within each domain to reflect a range of needs. The DST also records information not captured anywhere in the document, such as the advice and views of a person's family and those staff in assessing individuals. Although not all domains have a severe or priority level, the levels set out in the DST provide sufficient information to capture a comprehensive picture of a person's needs.

I recognise, however, arrangements to determine and provide CHC need to be effective. The Wales Audit Office (WAO) is currently finalising its national study relating to the present arrangements. As part of this work it will consider the effectiveness of the DST as well as the CHC National Programme, the 2010 National Framework and the systems which support them (including the training of staff). The WAO is due to publish the findings of its study in the near future. Its report will contain recommendations for Welsh Ministers as well as for Health Boards and Local Authorities. As part of this process my officials are engaged with the WAO to discuss high level issues as they emerge. I understand the WAO is aware of concerns raised in relation to the DST and is, as part of its study, considering its appropriateness.

Bae Caerdydd • Cardiff Bay
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CF99 1NA

English Enquiry Line 0845 010 3300
Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence.lesley.Griffiths@wales.gsi.gov.uk

Wedi'i argraffu ar bapur wedi'i ailgylchu (100%)
Tudalen 213

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I have my own commitment to undertake a review of the CHC Framework and to address outstanding issues related to it. This review will follow the publication of the WAO's findings to allow any relevant recommendations made from it to be considered.

A handwritten signature in cursive script that reads "Lesley".

Lesley Griffiths AC / AM

Y Gweinidog Iechyd a Gwasanaethau Cymdeithasol
Minister for Health and Social Services

T 020 7423 3683
F 020 7423 3501

28th March 2013

Dear Sir/Madam

Thank you for your letter requesting our views on the petition received from Helen Jones. Alzheimer's Society strongly supports the recommendations within Helen Jones' petition. People with dementia have experienced particular difficulties trying to obtain NHS Continuing Care funding (NHS CC). The artificial distinction made between care provided by the NHS (free of charge) and social care arranged by social services (means tested) is at the heart of the problem. We would like to submit the following comments:

1. "Bring to an end the discrimination against dementia sufferers in Wales who apply for NHS Continuing Care Funding, by allowing for the cognition category of need (known as the domain) to go up to the level Severe in the Welsh version of Decision Support Tool. This would bring it in line with the English version."

The purpose of an NHS Continuing Care assessment is to determine whether a person has a 'primary health need' and therefore whether the NHS is legally obliged to fund care to meet that need. The decision support tool supports this assessment and should ensure consistent decision making.

A person has a primary health need if the nursing or health services they require are "more than incidental or ancillary to the provision of accommodation which a social services authority is, or would be but for a person's means, under a duty to provide; or "Of a nature beyond which a social services authority whose primary responsibility is to provide social services could be expected to provide."

A 2010 WAG circular on CHC urges the following to be key factors in determining whether care is beyond the power of a local authority to provide: **nature** (physical / mental / psychological), **intensity** (extent and severity), **complexity** and **unpredictability** of the condition.¹

The Decision Support Tool portrays need are based on 12 care domains which are each subdivided into statements of need which represent: no needs, low, moderate, high severe or priority levels of need. Not all of the care domains include all these levels.

A multidisciplinary team carrying out the assessment should consider which description of need for each domain best represents the individual. Once the DST is completed, the MDT

should consider the overall level of need and the interaction between needs in different care domains, bearing in mind the four factors described above. It is the totality of a person's day to day care needs that determine whether they have a primary health need.

In the Welsh DST the highest rating in the cognition domain is 'high'. It does not include a severe level. This domain is problematic for two reasons.

Firstly, Alzheimer's Society believes that the descriptive terms used within the 'high' band do not capture the severity of need or level of risk experienced by a person with very severe dementia. For example a person who scores 'high' is judged to have "awareness of only a limited range of needs and basic risks." While everyone experiences dementia differently, a person who is very severely cognitively impaired may have no awareness at all of need and basic risks. They may be completely incapacitated. This is not captured within the descriptive terms within the 'high' band. Because the Welsh DST is not able to capture the full range of the need of someone with dementia we believe it cannot effectively inform NHS CC assessments.

Secondly, having only a 'high' band within the cognition domain suggests that cognitive impairment does not contribute significantly to a person's overall health need. This tips the balance within the Welsh DST towards the physical aspects of healthcare. A very high level of impairment of the mental processes of the brain, including thinking, judgement, etc., clearly presents a severe and complex need in itself. In addition, the interaction of severe cognitive impairment with other health needs (as commonly experienced by the elderly) will often result in a very challenging set of needs. However, with only 'high' level of needs available within the domain for the assessor to consider makes it more difficult for someone with a primary health need due to dementia to obtain NHS CC funding than it would for someone with a health need arising from a physical condition.

In contrast the English Decision Support Tool contains a 'severe' band within the cognition domain. The descriptive terms better capture the extent of cognitive impairment in an individual with severe dementia:

"The individual is unable to assess basic risks even with supervision, prompting or assistance, and is dependent on others to anticipate their basic needs and to protect them from harm, neglect or health deterioration."

The English DST therefore is much better able to capture the needs of a person with dementia and provides a better balance between mental and physical health needs. It is much better placed to assist a fair and effective assessment. We fear that in Wales people with very severe dementia are denied the funding that is their right and local authorities are providing care that is beyond their power to provide because the tool is not able to assess their level of need.

Alzheimer's Society urges the Welsh Assembly Government to end the discrimination faced by people with dementia in Wales by including a 'severe' band within the cognition domain.

2. Direct Local Health Boards to implement the National Framework for N.H.S continuing Care Funding correctly in terms of patient eligibility and without regard to budgetary constraints.

The Alzheimer's Society NHS Continuing Care Volunteer Support Group offers direct support to people who wish to appeal when someone with dementia has been turned down for NHS Continuing Care funding. The volunteers have personal experience of appealing an NHS Continuing Healthcare cases for their own family members and are passionate about helping others that are in similar situations to them.

Through their work the Volunteer Support Group collect evidence of problems with the implementation of NHS Continuing Care policy within Wales. It is their experience that it is becoming increasingly difficult to obtain NHS Continuing Care funding and thresholds for eligibility are being gradually raised without statutory authority, i.e. the benchmark standard provided by the Coughlan case is being ignored. There are also frequent problems with the implementation of the Framework, for example a failure to provide family members with advice in relation to the process as required by the Framework and as a consequence they are unable to make a meaningful contribution to the assessment process. The Welsh Ombudsman has noted cases where no reasons were provided to families, and no minutes were available to document the reasoning behind the decisions of LHB panels.

We recognise the current financial situation, but it is important that individuals are awarded the funding and support that is their right. The appeal process is incredibly complex and stressful, and can be very emotionally challenging, usually for people who also have the substantial burden of caring for someone in the later states of dementia. NHS Continuing Care assessments that follow the Framework correctly would help to avoid this stress and also the need to direct resources towards appeals.

Please do not hesitate to contact me if you would like any further information. I look forward to learning the outcome of the Committee's discussions.

Yours sincerely

Samantha Sharp
Senior Policy Officer

P-04-458: Cadwch Addysg Bellach yn y Sector Cyhoeddus

Geiriad y ddeiseb:

Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i sicrhau:

1. Y caiff addysg bellach, ynghyd ag asedau sy'n cael arian cyhoeddus, eu cadw o fewn y sector cyhoeddus.
2. Y bydd colegau'n parhau i ymrwmo i gytundebau cenedlaethol o ran Addysg Bellach, fel y graddfeydd cyflog cenedlaethol.
3. Y caiff contract Cymru gyfan ei gyflwyno ar gyfer darlithwyr ym maes Addysg Bellach
4. Na fydd Gweinidogion Cymru yn diddymu colegau na rhoi'r gallu i golegau drosglwyddo eiddo, hawliau a chyfrifoldebau i gorff arall.

Prif ddeisebydd: UCU Crosskeys Branch

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 19 Chwefror 2013

Nifer y llofnodion: 246

Leighton Andrews AC / AM
Y Gweinidog Addysg a Sgiliau
Minister for Education and Skills



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-458
Ein cyf/Our ref LA/01201/13

William Powell AM

Naomi.stocks@wales.gov.uk

8 May 2013

Dear William,

Thank you for your letter of 24 April regarding my response of 12 March in relation to the petition from the UCU Crosskeys branch highlighting their concerns with the proposals outlined in the Further and Higher Education (Wales) Bill 2013.

The Further and Higher Education (Governance and Information) (Wales) Bill 2013, which I introduced to the National Assembly for Wales on 30 April will give the governing bodies of further education corporations the power to dissolve the corporation. This power, however, will be regulated to protect publicly funded assets.

In the 2014/15 academic year I propose to consult on secondary legislation that will regulate the transfer of a corporation's rights and assets on dissolution by specifying the type of persons or bodies to whom a corporation can transfer their assets. Assets transferred will also have to be used for charitable purposes which are exclusively for educational purposes. To reiterate what I said in my introductory statement to Assembly Members on 30 April, I expect colleges to continue to take responsibility to ensure that they not only fulfil, but exceed the expectations and aspirations of their wide ranging customers. Our objective is to build a Wales that gives our young people the very chances in life that is at the heart of the Welsh Government's vision.

There is no policy intention in Wales to establish Academies and privately-run institutions.

*Yours sincerely,
Leighton Adams*

Leighton Andrews AC / AM
Y Gweinidog Addysg a Sgiliau
Minister for Education and Skills

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1NA

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Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence: Leighton.Andrews@wales.gsi.gov.uk

Wedi'i argraffu ar bapur wedi'i ailgylchu (100%)

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P-04-458 Keep Further Education in the Public Sector- Correspondence from the petitioner to the Chair, 20.05.13

UCU Crosskeys Branch would like to submit the following points for consideration by the Petitions Committee:

- 1) The Minister's letter states there are no plans for Academies and privately-run institutions in Wales. If governing bodies are given the power to dissolve the corporation and transfer a corporation's rights and assets to a person or bodies, to whom could these responsibilities and assets be transferred to if the Minister has already ruled out privately-run institutions in his letter dated 8th May?
- 2) The Minister has not explained why it might be necessary for a FEI to dissolve itself, and the power to transfer its property, rights and liabilities to another body. Providing examples, what situations might this be necessary?
- 3) In the Bill's Explanatory Memorandum a cost benefit analysis is provided. For *Option 3: Introduce an Assembly Bill* it outlines the risks on page 24, stating "*That the legislation does not give the ONS Classification Committee the assurances needed that key steps have taken place to increase the autonomy of FE colleges and the reversal of the public sector categorisation for national account purposes fails.*" It is possible the Minister could be pressing ahead with this Bill that would not resolve the ONS classification issue.
- 4) Can the Minister confirm if he has consulted the Welsh Labour National Policy Forum on this Bill, given it goes against the commitments outlined in the 2011 Welsh Labour National Assembly for Wales election manifesto?

We would be grateful if the Petitions Committee would consider asking the Minister to clarify these above questions.

Yours truly

UCU Crosskeys Branch

Eitem 5.15

P-03-240 Diogelwch ar ffordd yr A40 yn Llanddewi Felffre

Geiriad y ddeiseb

Oherwydd y lefel gynyddol o draffig, yn enwedig cerbydau nwyddau trwm, ar yr A40 ac oherwydd y ddarpariaeth annigonol o balmentydd a chroesfannau cerddwyr diogel, a gydnabyddir gan yr Asiantaeth Cefnffyrdd drwy ymchwil a gyflawnwyd ar ran Llywodraeth Cynulliad Cymru, rydym ni, sydd wedi llofnodi isod, yn galw ar Lywodraeth Cynulliad Cymru i wella diogelwch ar y ffordd ym mhentre Llanddewi Felffre, Arberth, Sir Benfro, drwy roi'r mesurau a ganlyn ar waith, a hynny ar fyrder:

1. Gwella'r palmant annigonol ar hyd ochr ddeheuol yr A40 rhwng Llandaff Row a phen dwyreiniol y pentref i sicrhau ei fod yn boddhau safonau diogelwch presennol, a'i fod yn ddigon llydan i gael ei ddefnyddio'n ddiogel gan gerddwyr, cadeiriau gwthio a chadeiriau olwyn gan roi ystyriaeth i'r ffaith bod cerbydau nwyddau trwm yn gyrru heibio'n agos ac yn aml ac yn gyrru'n gyflymach na'r terfyn cyflymder presennol o 40 mya.
2. Gosod camerâu cyflymdra yn nwyrain ac yng ngorllewin y pentref.
3. Defnyddio system drydanol sydd eisoes yn bodoli ar gyfer arwyddion i groesi'r ffordd er mwyn darparu goleuadau rhybudd sy'n fflachio ar adegau pan fydd plant yn croesi'r A40 i ddal eu bws ysgol.
4. Gosod mesurau i ostegu traffig bob ochr i'r pentref ac ar gyffyrdd i bwysleisio'r angen i arafu.
5. Gostwng y terfyn cyflymder i 30mya.

Cynigwyd gan: Cyngor Cymuned Llanddewi Felffre

Ystyriwyd gan y Pwyllgor am y tro cyntaf: Medi 2009

Nifer y llofnodion: 154

Edwina Hart MBE OStJ AC / AM
Gweinidog yr Economi, Gwyddoniaeth a Thrafnidiaeth
Minister for Economy, Science and Transport



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-03-240
Ein cyf/Our ref EH/00820/13

William Powell AM
Chair of Petition Committee

committeebusiness@Wales.gsi.gov.uk

01 May 2013

Dear William,

Thank you for your letter of 8 April regarding safety improvements to the A40 trunk road at Llandewi Velfrey.

I am happy to confirm that the bid for safety improvements at Llandewi Velfrey was successful and money has been allocated in the 2013/14 programme.

The works are likely to be completed by the end of November this year and will include an upgrade of 40mph repeater signs and gateway enhancements at either end of the village.

A handwritten signature in black ink, appearing to read 'Edwina Hart'.

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1NA

Wedi'i argraffu ar bapur wedi'i ailgylchu (100%)

English Enquiry Line 0845 010 3300
Llinell Ymholiadau Cymraeg 0845 010 4400
Correspondence.edwina.Hart@Wales.gsi.gov.uk
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P-03-240 Road safety on the A40 in Llanddewi Velfrey – Correspondence from the petitioner to the Chair, 24.05.2013

William Powell AM
Chairman of Petitions Committee
Welsh Government
Cardiff Bay
CF99 1NA

24th May 2013

Dear Mr Powell

Ref: Petition P-03-240 safety improvements to A40 in Llanddewi Velfrey

We have been pleased to hear that there has been some acknowledgement of problems in Llanddewi Velfrey and that money has been allocated in 2013-14 to begin improvements. The minister has promised improved signage and 'gateway enhancements' that we hope will be linked to rigorous enforcement of the speed limits to ensure they are effective. Further clarification of these 'gateway enhancements' would also be useful.

We welcome these first moves and thank the Petitions Committee for their continued support while remaining convinced that additional measures are still required to safeguard local residents i.e. improvements to inadequate pavements and crossing. As previously stated traffic surveys show that the average speed of vehicles passing through the village is on, or just below the speed limit. This will understandably lead decision makers to conclude there is very little problem. However in making the calculations it is normal practice to remove the top 15% giving a totally unrealistic picture. So if we are told that the average speed is 39mph then **15% of vehicles are travelling above the limit.** This is surely unsafe and unacceptable.

We realise that in these difficult times and with the prospect of a by-pass in the near future, it may be difficult to justify significant expense. **To safeguard pedestrians we either need wider pavements or slower traffic.** The promised measures will hopefully go some way towards reducing the danger but we are convinced that they are a first step in the right direction and that further action should still remain a consideration.

Yours sincerely

Lynda Hill

Clerk to Llanddewi Velfrey Community Council

P-04-373 Atal Faniau Symudol Bwydydd Cyflym rhag gweithredu mewn ardaloedd Ysgolion

Geiriad y ddeiseb:

Mae'r Deisebwyr yn galw ar Lywodraeth Cymru i ystyried deddfwriaeth i atal Faniau Symudol Bwydydd Cyflym rhag gweithredu o fewn 400 metr i bob ysgol yng Nghymru, a hynny rhwng 08.00 a 16.30 o ddydd Llun i ddydd Gwener yn ystod y tymor.

Prif ddeisebydd: Arfon Jones

Ystyriwyd gan y Pwyllgor am y tro cyntaf: 13 Mawrth 2012

Nifer y deisebwyr: 43

Gwybodaeth ategol: Mae Cyngor Wrecsam yn ddiweddar wedi cytuno ar nodyn Cyfarwyddyd Cynllunio sy'n dweud: Ni ddylai Mannau Gwerthu Bwydydd Poeth Cyflym newydd gael eu lleoli... o fewn 400 metr i ffin ysgol neu goleg trydyddol. Ni ellir defnyddio amodau cynllunio i gyfyngu defnyddio cerbydau symudol bwydydd cyflym, ac os ydynt yn cydymffurfio â rheoliadau priffyrdd ac iechyd yr amgylchedd, gallant weithredu heb drwydded. Dadleuir, felly, y bydd deddfu fel yr awgrymir yn hyrwyddo nod cymdeithasol o leihau faint o fwydydd afiach rhad sydd ar gael i blant, yn lleihau gordewdra ac yn hyrwyddo bwyta iach.

Edwina Hart MBE CStJ AC / AM
Gweinidog yr Economi, Gwyddoniaeth a Thrafnidiaeth
Minister for Economy, Science and Transport



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-373
Ein cyf/Our ref EH/01176/13

William Powell AM

committeebusiness@Wales.gsi.gov.uk

10 May 2013

Dear William,

Further to previous correspondence about 'Trading in Laybys'.

The development of the new policy will be complete by the end of July. I will write to you again to advise when the policy will be introduced.

A handwritten signature in black ink, appearing to be 'Edwina Hart', written in a cursive style.

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1NA

Wedi'i argraffu ar bapur wedi'i ailgylchu (100%)

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Correspondence.edwina.Hart@Wales.gsi.gov.uk
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P-04-457 Yr Ymgyrch Caplaniaeth Elusennol

Geiriad y ddeiseb:

Rydym yn galw ar y Cynulliad Cenedlaethol i annog Llywodraeth Cymru i beidio â defnyddio cyllideb y Gwasanaeth Iechyd Gwladol ar gyfer gofal crefyddol, ac i weithio gydag arweinyddion crefydd gyfundrefnol i sefydlu ymddiriedolaeth elusennol i ariannu gofal crefyddol yn ysbytai Cymru.

Gwybodaeth ychwanegol

Mae'r ymgyrch caplaniaeth elusennol yn cynnwys rhwydwaith anffurfiol o ddinasyddion sy'n pryderu y dylid defnyddio pob miliwn o bunnoedd o arian cyhoeddus a ddyrennir i'r GIG yng Nghymru i hyrwyddo iechyd cyhoeddus ac i drin y rheini sydd angen sylw meddygol.

Nid oes gan ein hymgyrch unrhyw arian ac nid oes angen unrhyw arian arnom. Ni chaiff ei noddi gan unrhyw sefydliad arall yng Nghymru na'r tu allan i Gymru. Mae gwasanaethau modern sy'n seiliedig ar y rhyngrydd yn caniatáu i ni gyfathrebu â'n gilydd ac â'n cynrychiolwyr sydd wedi'u hethol yn ddemocrataidd.

Mae ein cefnogwyr i gyd wedi gweld dwy ddogfen sydd wedi'u darparu i gefnogi'r ddeiseb hon ac maent yn cytuno â hwy, sef Principles, sy'n nodi ein hysgogiad, a Proposal sy'n nodi ein hachos gyda thystiolaeth ategol a dadl resymegol.

Rydym yn darparu trydedd dogfen sef Employment, sy'n rhoi tystiolaeth o'r ffordd y caiff yr arian sy'n cael ei dynnu o Gyllideb y GIG ar gyfer gwasanaethau caplaniaeth ysbytai ei wario ar hyn o bryd.

Prif ddeisebydd: Yr Ymgyrch Caplaniaeth Elusennol

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 19 Chwefror 2013

Mark Drakeford AC / AM
Y Gweinidog Iechyd a Gwasanaethau Cymdeithasol
Minister for Health and Social Services



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref P-04-457
Ein cyf/Our ref MD/00682/13

William Powell AM
Chair
Petitions Committee

Naomi.Stocks@wales.gov.uk

23 May 2013

Dear William

Thank you for your letter of 24 April on behalf of the Petitions Committee enclosing a copy of correspondence from Alan Rogers about the Charitable Chaplaincy Campaign.

Spiritual care givers offer spiritual care not only to members of faith communities but to the majority of patients, carers and staff who have no association whatsoever with any religious group. The Spiritual Care Services are part of the core team of people in the health service who provide vital support to people in times of need.

I can only reiterate and agree what was said by my predecessor in the last correspondence to you, that the best way to ensure patients and staff throughout Wales have the appropriate access to those services is to continue to support them financially through the NHS.

Best wishes

Mark

Mark Drakeford AC / AM
Y Gweinidog Iechyd a Gwasanaethau Cymdeithasol
Minister for Health and Social Services

The Charitable Chaplaincy Campaign

The Wales-wide, cross-party campaign for a charitable hospital chaplaincy.

Charitable Trusts

The usual test used today was laid down by their Lordships in *IRC v Pemsel* ^[1]. To be charitable, a trust must serve one of the following purposes:

- 1) The relief of Poverty [Public benefit test does not apply]
- 2) The Advancement of Education
- 3) The Advancement of Religion^[2]
- 4) Any other purpose beneficial to the Community not falling within the other categories.

[A revision in 2011 added nine other purposes - none relevant to our case.]

It is likely that a Wales Hospital Chaplaincy Fund (HCF) for publicly financed hospitals (profit-making private hospitals must be excluded) would be an acceptable proposal to the Charities Commission under either 3 or 4 of the list above. The terms of reference of the Hospital Chaplaincy Service (HCS) would determine which of the listed purposes was appropriate. The HCF would be established for the exclusive purpose of funding the HCS.

Definitions of religious and spiritual care.

The set of “Guidance” documents for Spiritual Support in the Wales NHS contains a serious ambiguity which makes discussion of this matter difficult.

The document *Guidance on Capabilities and Competences for Healthcare Chaplains/Spiritual Care Givers* provides two definitions on page 4 (quoting from *Service Development for Spiritual Care in the NHS Wales 2010*):

Spiritual Care is usually given in a one to one relationship, is completely person centred and makes no assumptions about personal conviction or life orientation.

Religious Care is given in the context of shared religious beliefs, values, liturgies and lifestyle of a faith community.

It then goes on to claim that –

“Spiritual care is often used as the overall term and is relevant for all”

This is bound to produce confusion. If the two forms of care are to be conflated then a separate term is required to remove this ambiguity.

An example of the consequence of this ambiguity occurs on the same page of the document. At one point it states “Spiritual care can be provided by all health care staff, by carers, families and other patients.” This must imply the separate definition above. It then goes on to make the unjustified claim “Chaplains are the specialist spiritual care providers”. If, in this sentence, the word “spiritual” is replaced by the word “religious” the claim might be acceptable, since the chaplain is usually a cleric, but only if the recipient of such care is of the same faith as the chaplain. Of course the

chaplain should offer spiritual care as defined by the separate definition above - that would seem to be the duty of all NHS staff in contact with patients and their families. The nursing profession might rightly claim that its members are the specialist spiritual care (as defined above) providers by virtue of their selection for employment and their professional training. It seems to me that being capable of offering spiritual care (as defined above) is as essential for an NHS employee in contact with patients and their loved ones as honesty is for a bank employee or courage and loyalty for a member of the armed services. In truth the term “spiritual care” is imprecise, ambiguous and confusing. It would be better to replace it with the three well defined terms:-
Religious care – The pastoral care provided by clerics to those who require it.
Empathetic care – The ethos by which all hospital care is delivered
Holistic care – The model of hospital care which recognises the mind-body nexus and delivers care guided by evidence of medical efficacy within an empathetic ethos.

The cost figures given below were obtained in reply to the question:-
For the previous financial year, what was the total cost to your Board for the provision of Chaplaincy Services?

It is reasonable to assume that the costs relating to training nursing staff in correct spiritual care (as defined above) and the allowance for such care in calculating work load were **not** included. The costs given are therefore in respect of Religious Care.

Stakeholder analysis

For each stakeholder it is possible to compare their interests in the choice between tax-payer funding and charitable funding of the Hospital Chaplaincy Service.

Patients: The same service is delivered by the same people and the individual patient should be entirely unaffected by the means of funding.

NHS Staff: Charitable trust funding may mean that a number of staff would retain their jobs in spite of future financial stringencies whilst the chaplaincy service received is the same in both cases.

The Wales NHS: The NHS will be able to deliver more than one million pounds worth of additional medical and/or nursing and/or ambulance services every year in perpetuity if chaplaincy is funded by a charitable trust.

The Minister: It may be felt that making the change from using NHS monies to Trust monies involves some political risk. This can be minimised by considerate transition arrangements and it would be understood by the tax-payer in a time of funding constraint.

The religious denominations: It would seem best that the tax-payer through the NHS Wales pays the bill for the chaplaincy service. But the establishment of a charitable trust would be an admirable ecumenical activity which enhances their reputation and involves their adherents in supporting fellow believers in times and situations of great challenge. This stakeholder might believe funding for chaplaincy is more secure if it comes from the public purse. This is much less likely to be true in future. Indeed, with sufficient voluntary effort, the funds raised by such a charity might even exceed those at present provided by the Wales NHS enabling a broader range of sects to be represented in chaplaincy.

The cost of chaplaincy

	2007/8	2008/9
North Wales NHS Trust	£ 159,289	£ 170,144
Velindre NHS Trust	£ 18,934	£ 19,514
Cwm Taf NHS Trust	£ 46,093	£ 97,809
Abertawe bro Morgannwg	£ 218,299	£ 216,642
Hywel Dda NHS Trust	£ 63,185	£ 115,774
Gwent Healthcare NHS Trust	£ 240,596	£ 251,483
North West Wales NHS Trust	£ 95,429	£ 103,877
Cardiff & Vale NHS Trust	£ 312,000	£ 300,845
Powys Local Health Board	£ 35,228	£ 38,119
	=====	=====
	£1,189,013	£1,314,207
	2009/10	2010/11
Betsi Cadwladr NHS Trust*	£ 259,042	£ 221,619
Velindre NHS Trust	£ 57,162	£ 30,857
Cwm Taf NHS Trust	£ 117,990	£ 111,974
Abertawe bro Morgannwg	£ 214,000	£ 231,842
Hywel Dda NHS Trust	£ 124,556	£ 157,793
Aneurin Bevan NHS Trust	£ 259,910	£ 260,589
Cardiff & Vale NHS Trust	£ 293,158	£ 293,351
Powys Local Health Trust	£ 46,603	£ 45,389
	=====	=====
	£1,372,421	£1,353,414
	2011/12	2012/13
Betsi Cadwaladr NHS Trust	£ 225,815	£ 259,164
Velindre NHS Trust	£ 30,856	£ 30,857
Cwm Taf NHS Trust	£ 132,102	£ 125,035
Abertawe bro Morgannwg	£ 237,426	£ 187,179
Hywel Dda NHS Trust	£ 171,133	£ 182,815
Aneurin Bevan NHS Trust	£ 255,173	£ 246,494
Cardiff & Vale NHS Trust	£ 238,425	£ 228,635
Powys Local Health Trust	£ 34,543	£ 38,364
	=====	=====
TOTAL	£1,325,473	£1,298,543

* Combined North Wales and North West Wales Trusts

Total expenditure since figures first collected. **£7,853,071**

Conclusion

The provision of a hospital chaplaincy service is not a statutory obligation for the NHS. It is probably best described as a traditional provision by the NHS.

The funds available to the Wales NHS will never be so generous that a contribution from the voluntary sector may be rejected without good reason. Even if current funding (indexed against inflation) is maintained, an aging population, advances in medical and pharmaceutical science, developments in medical and nursing techniques and the rising expectations of the population will always place ever greater demands on NHS budgets. A million and a quarter pounds each and every year into the future may be seen as a small contribution but only by obtaining many such small contributions may these increasing demands be met.

The creation of a Hospital Chaplaincy Fund to cover the cost of religious care by hospital chaplains will be good for the churches, chapels, mosques, kingdom halls, temples and synagogues. The humanist movement might also join this enterprise. It would be an ecumenical enterprise that builds bridges between faiths.

The proposed charity would need to raise about £1.5 million per year to maintain the present service. This is entirely achievable. While the present fiscal arrangements are in place, a portion of this amount would be met by “gift aid” tax which is returned by the Treasury.

It would, of course, be for the NHS Wales and the proposed Hospital Chaplaincy Fund (HCF) to agree the appointment and employment arrangements for HCF funded chaplains. Since this issue has been raised during the Charitable Chaplaincy Campaign, we offer the view that hospital chaplains should be properly regulated, CRB checked, representative of the local population and trained to a high standard which must include awareness that proselytism and evangelism in an NHS setting is unacceptable. The HCF fund-raising target should be to finance the current level of establishment. If the HCF raises more money than is required to support this staffing level, additional appointments might be discussed with the Health Boards. If there is a shortfall, staffing levels would correspondingly be reduced.

The Church in Wales, the Catholic Church (Wales) and the Free Church Council have been asked to consider this matter. The reaction has been, “the NHS has taken responsibility for religious care, so the churches need not act”. Regrettably there appears to be a lack of leadership from the faith communities in this matter. As a consequence, a strong political lead is required; perhaps amounting to a declaration of a time period for the transition to charitable funding.

Notes

[1] <http://www.charity-commission.gov.uk/publications/rr1a.aspx>

[2] This term seems to have been revised very recently to:-
Public Benefit and the Advancement of Moral or Ethical Belief Systems

Alan Rogers October 2012

Appendix I

CHAPLAINCY COSTS 2012/2013

	COST	WTE	Cost/WTE *
Betsi Cadwaladr	£259,164	5.47	£47,379
Velindre	£ 30,857	0.5	£61,714
Cwm Taf	£125,035	3.39	£36,883
Abertawe bro Morganwg	£187,179	3.73	£50,182
Hywel Dda	£182,815	4.45	£41,082
Aneurin Bevan	£246,494	5.61	£43,963
Cardiff & Vale	£228,635	6.27	£36,465
Powys	£ 38,364	0.92	£41,700

* Calculated by AJR.

Eitem 7

P-04-474 Cefnogaeth i wasanaethau caplaniaeth y GIG

Geiriad y ddeiseb:

Rydym yn cydnabod cyfraniad cadarnhaol gwasanaethau caplaniaeth ysbytai o ran darparu gofal ysbrydol o fewn y GIG yng Nghymru ac yn cydnabod y gwaith aruthrol y mae'r gwasanaeth caplaniaeth yn y GIG yn ei ddarparu.

Mae'r gwasanaeth hwn yn chwarae rhan bwysig yn lles ysbrydol cleifion a staff y GIG, nid yn unig i'r rheini sydd â chysylltiad crefyddol ond hefyd i eraill nad oes ganddynt unrhyw gysylltiad â grŵp crefyddol. Rydym yn galw ar Gynulliad Cenedlaethol Cymru i annog Llywodraeth Cymru i barhau â'i ymrwymiad i ariannu gwasanaethau caplaniaeth ysbytai ac i ehangu manteision gwasanaethau caplaniaeth i leoliadau gofal eraill, gan gynnwys lleoliadau gofal sylfaenol a chymdeithasol.

Prif ddeisebydd: Jim Stewart

Ysytiriwyd am y tro cyntaf gan y Pwyllgor: 16 Ebrill 2013

Nifer y llofnodion: 1077

Petition in support of an NHS-funded chaplaincy service

1. There is strong support for NHS-funded hospital chaplaincy services among Wales' faith communities

In November 2011 I asked the members of the Interfaith Council of Wales whether or not they supported an NHS-funded hospital chaplaincy service. This was in preparation for a Cross Party Group on Faith meeting on the importance of spiritual care

All those who responded to my email were in support of an NHS-funded chaplaincy service, including the following faith communities:

- a. Jewish
- b. Muslim
- c. Buddhist
- d. Hindu
- e. Sikh

....and the following Christian denominations / networks:

- a. Quakers
- b. Methodists
- c. Church in Wales
- d. Annibynwyr
- e. Salvation Army
- f. Congregational Federation
- g. Evangelical Alliance

I didn't receive a response from the Catholic Church or the Baha'is. The majority of members of the Interfaith Council of Wales were therefore in support of an NHS-funded hospital chaplaincy service.

2. Chaplaincy services have the support of the First Minister

Hospital chaplaincy was discussed in the Faith Communities Forum meeting of 24 October 2012, in which the First Minister spoke in positive terms of chaplaincy services (see extract from the official minutes below, especially point g.)

Chaplaincy

- a. The First Minister gave an update on the implementation of the Welsh Government Standards, Capabilities and Competence Framework for Spiritual Caregivers and progress against these Standards.

- b. The Spiritual Care Standards promotes partnership working between the Health Board and Trusts with the communities that they serve. This ensures that spiritual care is accessible in all NHS care settings. NHS organisations' individual action plans are routinely monitored.
- c. Welsh Government officials are working closely with NHS, Welsh Language Board and Welsh Language Commission to ensure the Standards comply with the Welsh Language measure.
- d. A number of excellent initiatives have already been adopted. These include all Health Boards/Trusts having identified individuals who are responsible for co-ordinating the implementation of the Standards. Some specific examples include Betsi Cadwaladr University Health Board who held a Spiritual Awareness Conference in May and Cwm Taff Health Board who have introduced a 'bank' of chaplains to provide cover throughout the year.
- e. Barry Morgan said that there was a basic misunderstanding of the chaplaincy service. They offer support to those who want it at people's hour of need. Saleem Kidwai supported this view and confirmed that Imams are present in multi-faith chaplaincies to offer support where needed.
- f. The Chief Nursing Officer for Wales wrote to NHS organisations in April 2012 and will be writing again in November 2012 requesting an update on progress against each of the Standards.
- g. The First Minister referred to an incident in Cardiff on 19 October where a number of adults and children were admitted to the University Hospital Wales in the afternoon, with injuries caused by a roadside accident. The hospital chaplaincy service was immediately on hand to offer support to both the victims and victims' families.

3. There is a lack of transparency over the link between the Charitable Chaplaincy Campaign and the National Secular Society

The supporting information of the CCC petition, for example, includes the following sentence:

*The charitable chaplaincy campaign **comprises an informal network of citizen** who are concerned that every million pounds of public money allocated to the NHS in Wales should be used to promote public health and to treat those who need medical attention.*

What is not stated is the link between this campaign and the National Secular Society (NSS), whose strapline is “challenging religious privilege” and whose stated aims in campaigning for a secular state include (see [here](#)):

- a) Neither the state, nor any emanation of the state, expresses religious beliefs or preferences.
- b) The state does not engage in, fund or promote religious activities or practices.

Page 13 of their 2011 Annual Report (see [here](#)) refers to Alan Rogers and the Charitable Chaplaincy Campaign, saying the following:

*Our campaign to have hospital chaplaincy services funded by charity continues. Led by NSS member Alan Rogers, **secularists in Wales have been collecting data** on the cost of hospital chaplains.*

The link between this campaign and the National Secular Society can be further seen on the NSS website [here](#), where Alan Rogers talks about his work for the Charitable Chaplaincy Campaign in Wales.

Part of the rationale behind the CCC is its claim that citizens are concerned about public funding going to chaplaincy services. If, however, significant number of these citizens identify with a movement that is ideologically opposed to chaplaincy services being publicly funded in the first place (i.e. the NSS), then this claim must be scrutinised.

4. If chaplaincy services were to be funded by faith groups, it would lead to inequalities in service provision, with areas with an abundance of faith communities faring better than areas that do not.
5. Wynne Roberts will refer to the Standards for Spiritual Care Services in the NHS in Wales 2010 and I will also refer to a powerpoint produced by Steve Jamieson from the Royal College of Nursing, who leads on spiritual care in the RCN. Among his findings are the following:
 - a. 80.4% either disagreed or strongly disagreed with the statement I believe spirituality does not apply to atheists or agnostics (slide 28).
 - b. 96.5% said yes to “Whilst practising, have you ever encountered a patient(s) with spiritual needs? (slide 29)
 - c. 41.4% said they encountered patients with spiritual needs daily (slide 32)
6. My point in the petition *to extend the benefits of chaplaincy services to other care settings, including primary and social care settings* was simply that care homes and GP surgeries may be suitable places to extend spiritual care provision and chaplaincy services.