Agenda – Public Accounts Committee

Meeting Venue:
Committee Room 3 – The Senedd
Meeting date: 4 June 2018
Meeting time: 14.00

For further information contact:
Fay Bowen
Committee Clerk
0300 200 6565
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(Pre-meeting)

(14.00 – 14.15)

(The Committee agreed on 14 May 2018, a motion under Standing Order 17.42 to resolve to exclude the public from Item 1 of this meeting)

1 Care experienced children and young people: Consideration of key issues

(14.15 – 15.00) (Pages 1 – 5)

PAC(5)-15-18 Paper 1 – Key Issues

2 Introductions, apologies, substitutions and declarations of interest

(15.00)

3 Paper(s) to note

(15.00 – 15.10) (Pages 6 – 8)

3.1 Auditor General for Wales Report(s): First year review of how public bodies in Wales are implementing Well-being of Future Generations (Wales) Act 2015

(Pages 9 – 50)

3.2 NHS Wales Informatics Services: Additional information from Aneurin Bevan University Health Board (10 May 2018)

(Pages 51 – 59)

3.3 **Challenges of Digitalisation: Correspondence from the Welsh Government (16 May 2018)**

(Pages 60 – 66)

4 Intra-Wales – Cardiff to Anglesey – Air Service: Evidence Session

(15.10 – 16.30) (Pages 67 – 222)

Research Briefing

PAC(5)-15-18 Paper 2 – Welsh Government Review of the Air Link

PAC(5)-15-18 Paper 3 – Welsh Government update

PAC(5)-15-18 Paper 4 – Written Statement on the development of aviation Public Service Obligations

Andrew Slade – Director General, Economy, Skills and Natural Resources, Welsh Government

Simon Jones – Director, Economic Infrastructure, Welsh Government

5 Motion under Standing Order 17.42 to resolve to exclude the public from the meeting for the following business:

(16.30)

Item 6

6 Intra-Wales – Cardiff to Anglesey – Air Service: Consideration of evidence received

(16.30 – 17.00)

Agenda Item 1

Document is Restricted

Agenda Item 3

Concise Minutes – Public Accounts Committee

Meeting Venue:

Committee Room 3 – The Senedd

Meeting date: Monday, 14 May 2018

Meeting time: 14.00 – 16.15

This meeting can be viewed on Senedd TV at:

http://senedd.tv/en/4745

Attendance

Category	Names
Assembly Members:	Nick Ramsay AM (Chair) Mohammad Asghar (Oscar) AM Vikki Howells AM Rhianon Passmore AM Adam Price AM Lee Waters AM
Witnesses:	Dr Andrew Goodall, Welsh Government Alan Brace, Welsh Government Frances Duffy, Welsh Government Rhidian Hurle, Welsh Government
Wales Audit Office:	Huw Vaughan Thomas – Auditor General for Wales Mark Jeffs
Committee Staff:	Meriel Singleton (Second Clerk) Claire Griffiths (Deputy Clerk)

1 Introductions, apologies, substitutions and declarations of interest

1.1 The Chair welcomed the Members to the meeting.

1.2 Apologies were received from Neil Hamilton AM. There was no substitute.

2 Paper(s) to note

2.1 The papers were noted.

2.1 The Chair agreed to write to all Health Boards asking if they were content with the figures provided by the Director of NHS Wales Informatics Service regarding the double-running costs (PAC(5)-13-18 PTN6).

2.1 NHS Wales Informatics Services: Committee Correspondence

2.2 The 21st Century Schools and Education Programme: Letter from the Auditor General for Wales (24 April 2018)

2.3 The Welsh Government's initial funding of the Circuit of Wales project: Letter from the Cabinet Secretary for Economy and Transport (9 May 2018)

3 NHS Wales Informatics Services: Evidence Session 3

3.1 Members received evidence from Dr Andrew Goodall - Director General/NHS Chief Executive, Alan Brace, Frances Duffy from the Welsh Government together with Rhidian Hurle, Chief Clinical Information Officer for Wales, as part of their inquiry into NHS Wales Informatics Services.

4 Motion under Standing Order 17.42 to resolve to exclude the public from the meeting for the following business:

4.1 The motion was agreed.

5 NHS Wales Informatics Services: Consideration of evidence received and key issues

5.1 The evidence was considered.

6 The 21st Century Schools and Education Programme: Briefing from the Wales Audit Office

6.1 Mark Jeffs, Wales Audit Office, gave Members an oral briefing on the forthcoming inquiry into 21st Century Schools and Education Programme.

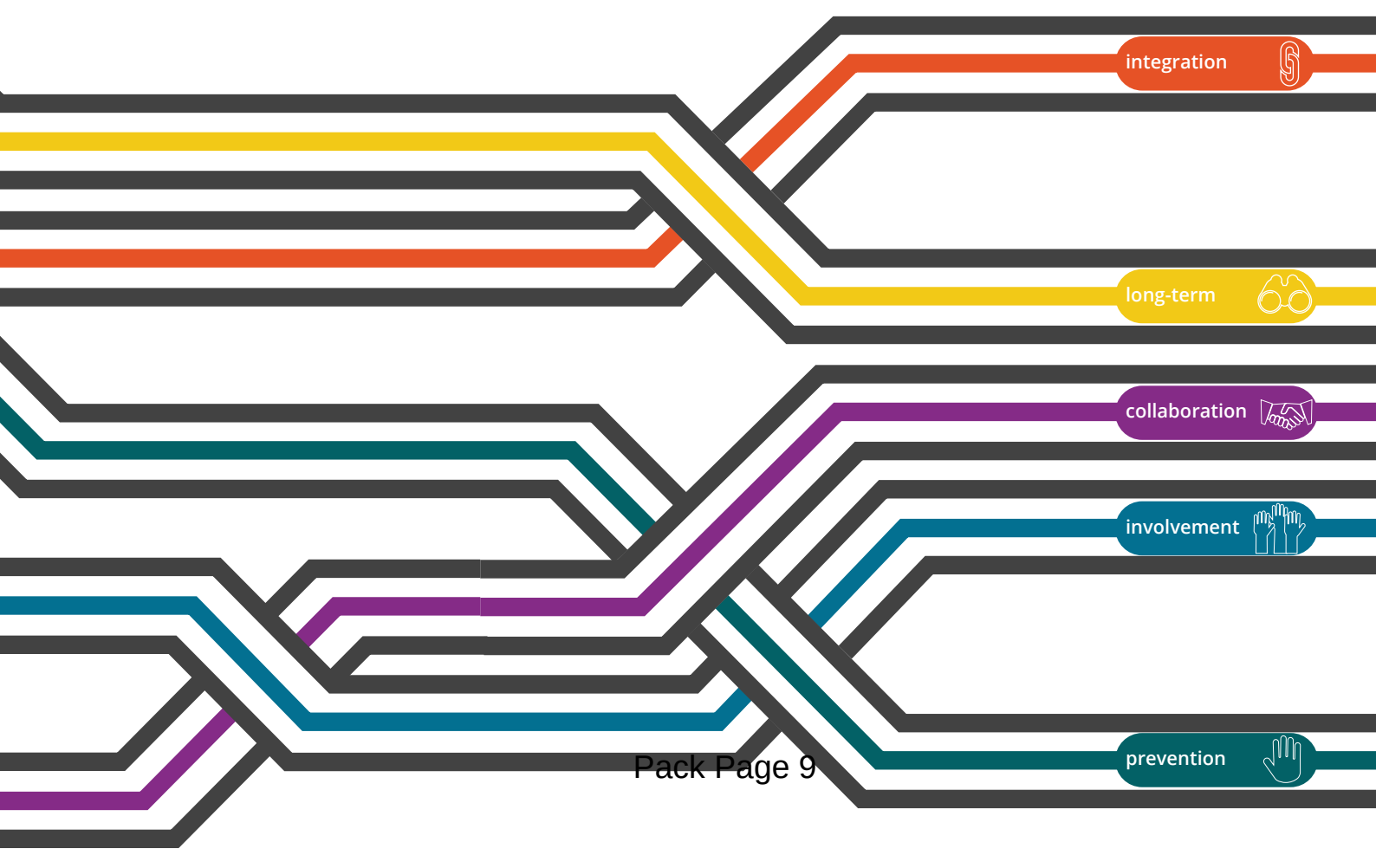
7 Wales Audit Office: Programme of value for money studies

7.1 The Auditor General discussed the contents of his letter with Members.

Reflecting on Year One: How Have Public Bodies Responded to the Well-being of Future Generations (Wales) Act 2015?

Archwilydd Cyffredinol Cymru
Auditor General for Wales

Swyddfa Archwilio Cymru
Wales Audit Office



I have prepared and published this report in accordance with the Government of Wales Act 1998 and the Public Audit (Wales) Act 2004.

The Wales Audit Office study team was managed by Catryn Holzinger under the direction of Jane Holownia.

Huw Vaughan Thomas
Auditor General for Wales
Wales Audit Office
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Cardiff
CF11 9LJ

The Auditor General is independent of the National Assembly and government. He examines and certifies the accounts of the Welsh Government and its sponsored and related public bodies, including NHS bodies. He also has the power to report to the National Assembly on the economy, efficiency and effectiveness with which those organisations have used, and may improve the use of, their resources in discharging their functions.

The Auditor General also audits local government bodies in Wales, conducts local government value for money studies and inspects for compliance with the requirements of the Local Government (Wales) Measure 2009.

The Auditor General undertakes his work using staff and other resources provided by the Wales Audit Office, which is a statutory board established for that purpose and to monitor and advise the Auditor General.

For further information, or if you require any of our publications in an alternative format and/or language, please contact us by telephone on 029 2032 0500, or email info@audit.wales. We welcome telephone calls in Welsh and English. You can also write to us in either Welsh or English and we will respond in the language you have used. Corresponding in Welsh will not lead to a delay.

Mae'r ddogfen hon hefyd ar gael yn Gymraeg.

‘I am pleased to hear public bodies talking about the Well-being of Future Generations Act with enthusiasm and optimism. I have been encouraged to hear them describe how they intend to change culture, as well as policies and processes. The examples they have shared with my office give a sense that they are starting to make the changes needed for them to effectively apply the sustainable development principle.

I do recognise and appreciate the range of internal and external challenges that make implementing new legislation difficult. However, there is a risk that for some, the Well-being of Future Generations Act is perceived as ‘another thing to do’. Unless those bodies and individuals adopt a mind-set where they see sustainable development as an approach that can help them address major budget and service challenges, rather than an additional burden, they will be unable to make the most of the opportunity the Act affords.’

Huw Vaughan Thomas
Auditor General for Wales

Contents

Public bodies support the principles of the Well-being of Future Generations (Wales) Act 2015 and are taking steps to change how they work.

Background and purpose

The Well-being of Future Generations Act and the Auditor General for Wales

1 The Well-being of Future Generations (Wales) Act 2015 (the Act) aims to create a Wales that we all want to live in, now and in the future. It requires 44 public bodies to carry out sustainable development, which is defined as:

> '…the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.'[1]

In carrying out sustainable development, public bodies must set well-being objectives and take all reasonable steps to meet them.

2 The Act defines the sustainable development principle as acting in a manner:

> '…which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.'[2]

3 To act in this manner, public bodies must take account of the 'five ways of working'. These are:

- looking to the long term so that they do not compromise the ability of future generations to meet their own needs;
- taking an integrated approach so that they look at all the well-being goals in deciding on their well-being objectives;
- involving a diversity of the population in the decisions that affect them;
- working with others in a collaborative way to find shared, sustainable solutions; and
- understanding the root causes of issues to prevent them from occurring or getting worse.[3]

In this way, the Act aims to improve what public bodies do and the way they do it so that they can collectively improve the well-being of Wales.

1 Part 2 2 **Well-being of Future Generations (Wales) Act 2015**
2 Part 2 5 (1) **Well-being of Future Generations (Wales) Act 2015**
3 Welsh Government, **Shared Purpose: Shared Future Statutory Guidance on the Well-being of Future Generations (Wales) Act 2015, 2016**

4 The Auditor General for Wales (the Auditor General) is statutorily required to examine public bodies to assess the extent to which they have acted in accordance with the sustainable development principle when:

a setting their well-being objectives; and

b taking steps to meet them.

The Auditor General must provide a report on his examinations to the National Assembly for Wales at least a year before each Assembly election. The first such report must be published by 2020, before the 2021 Assembly election.

5 The Future Generations Commissioner for Wales (the Commissioner) also has a part to play in ensuring public bodies are accountable for implementing the Act. The Commissioner is responsible for monitoring and assessing the extent to which public bodies are meeting their well-being objectives. The Auditor General and Commissioner have committed to work together to deliver their responsibilities.[4]

Why we have undertaken this review

6 The Act sets out a bold ambition for public bodies in Wales. It aims to drive a long term change in their culture and the outcomes they achieve. As the main provisions of the Act came into force in 2016, it is inevitable that public bodies will need time to effect that change. Therefore, while the Auditor General is required to examine all public bodies and report on them by 2020 he has emphasised that this is a transition period and recognises that all public bodies are on a learning path.

7 For this reason, the Auditor General decided to undertake a preliminary piece of work, in advance of commencing his formal examinations. This review aims to:

- provide an overview of how the 44 public bodies are responding to the Act;
- identify and disseminate emerging practice to help public bodies learn and improve; and
- help inform the focus of future audit work under the Act.

4 The Auditor General and Commissioner signed a Memorandum of Understanding in December 2017

8 Given the nature of the Auditor General's duty (see paragraph 4), this review has placed a particular emphasis on how public bodies are beginning to apply the sustainable development principle. The Wales Audit Office was also particularly keen to explore how public bodies had applied the sustainable development principle when setting their well-being objectives, given they were required to set them for the first time by April 2017.

9 This report, therefore, provides the Auditor General's commentary on how public bodies have responded to the Act in the first year. It gives some early feedback, without prescribing expectations for how public bodies should be undertaking their new responsibilities.

10 Overall, the Auditor General has concluded that:

> Public bodies support the principles of the Well-being of Future Generations (Wales) Act 2015 and are taking steps to change how they work

11 The Commissioner has published a report in parallel to this report: Well-being in Wales: The journey so far looks at the well-being objectives that public bodies have set and provides advice on how they can best demonstrate they are taking effective steps to meet them.[5]

12 In addition to this review, the Wales Audit Office has played an active role in helping public bodies learn about the Act through the shared learning seminars that are run by the Good Practice Exchange.[6]

5 Well-being of Future Generations Commissioner, **Well-being in Wales: The journey so far**, 2018.
6 Wales Audit Office, Good Practice Exchange, Shared Learning Seminars: past events

What we did

13 The Wales Audit Office has sought to understand public bodies' views on the Act, how they are beginning to respond and how they plan to continue improving. The main question we sought to answer was:

> What is the public body doing to respond to the Well-being of Future Generations (Wales) Act 2015 to ensure it can deliver its well-being duty and act in accordance with the sustainable development principle?

Specifically, we considered the following questions:

- how does the public body view the requirements of the legislation and the implications for how it works?
- what key actions has it taken to deliver its well-being duty and embed the sustainable development principle in how it works?
- what is it doing to identify further opportunities to deliver its well-being duty and embed the sustainable development principle?

14 To enable us answer these questions, we:

- asked public bodies to respond to a 'call for evidence' (Appendix 1) in summer 2017. This provided an opportunity for them to tell us about the work they are doing in their own words. It gave them the flexibility to tell us about the things they felt were important, recognising that each public body will respond to the Act in a different way.
- spoke to leaders, board chairpersons (or equivalents) and chief executives (or equivalents) of the public bodies.
- reviewed key documents, such as well-being statements.

15 We also asked public bodies to share examples of how they are applying the Act. Some of these examples are referenced later in this report. They are not intended to promote the right or best way of applying the Act, but rather to share the variety of ways that public bodies are beginning to respond. Many of the examples given are at relatively early stages of implementation and those bodies are continuing to learn and refine the approaches.

The Act sets out a bold ambition for public services in Wales and many public bodies see it as an opportunity to change their culture and improve how they work

The Well-being of Future Generations Act sets out a bold ambition for public services in Wales

16 The Act has been described by many as a ground-breaking piece of legislation, which is far-reaching and pioneering in both its nature and intent. The Act is new for Wales, but it is also unique internationally.

17 The Act's broad scope shows there is a clear intention for it to provide a framework for the way public services operate and deliver. It has been designed to promote sustainable development and enable government and other public bodies to meet the significant challenges facing them and the communities they serve.

> 'No other nation is taking these bold steps to legislate for long term well-being goals…
>
> … It will serve as the central theme of all our policies and legislation.'
>
> **Jeff Cuthbert**
> **Minister for Communities and Tackling Poverty, 2014**[7]

> 'The Bill is perhaps the most ambitious piece of legislation that the Welsh Government has ever attempted. It will require a fundamental shift in how we seek to tackle our biggest challenges as a nation.'
>
> **Carl Sargeant**
> **Natural Resources Minister, 2014**[8]

7 Statement by the Welsh Government, Jeff Cuthbert, Minister for Communities and Tackling Poverty, 2014
8 Carl Sargeant, Natural Resources Minister, **Wales in 2050: What kind of Wales do we want to live in?**, Wales Online 2014

‘The Well-being of Future Generations Act gives us the encouragement, the permission and the obligation to make the changes needed to deliver the Wales we want’

The Office of the Future Generations Commissioner[9]

18 However, the Act is not a complete departure from the policy and practice that preceded it. For example, the public services boards, well-being plans and well-being assessments set out by the Act are a progression from Local Service Boards, single integrated plans and needs assessments. The Act accords with well-established principles of good governance and policy making. Furthermore, pre-existing legislation required public bodies to consider sustainable development. For example, local authorities were required to consider how they contributed towards the achievement of sustainable development as part of their improvement responsibilities. The national park authorities have a longstanding duty to ‘foster the social and economic well-being of local communities’.[10] Natural Resources Wales must pursue the sustainable management of natural resources and apply the principles of sustainable management of natural resources in the exercise of its functions.[11] Given this context, it is perhaps unsurprising that there are differing views on the scale and pace of change the Act necessitates.

19 The Auditor General has also been clear that the essence of the Act is about changing behaviours and mind-sets. He has recognised that, while the Act is ground-breaking, it is also daunting because effecting that kind of change is not easy. Importantly, the Auditor General has emphasised that public bodies and wider stakeholders are on a journey together.

9 Office of the Future Generations Commissioner website https://futuregenerations.wales/making-it-happen/
10 Section 11A (1) The National Park and Access to the Countryside Act 1949
11 There are nine principles; adaptive management, scale, collaboration and engagement, public participation, evidence, multiple benefits, long term, preventative action and building resilience. Natural Resources Wales, **Managing today’s natural resources for tomorrow’s generations: Well-being Statement 2017-18**

> Are we going to rely too much on the past and not think through what we need to do to radically change, to develop new ways of approaching the aims and goals of the legislation?
>
> … Don't expect from the auditor, or from Sophie, a clear 'this is how to do it' - so you can go away and tick the boxes. It's not like that. It is, however, a journey in which I'm engaged, you're engaged and Sophie is engaged.
>
> **Huw Vaughan Thomas**
> **Auditor General for Wales, 2016**[12]

20 The Commissioner has emphasised that change needs to go beyond the duties and to focus on behaviours. She sees her role as being a supportive one in the early stages of the Act coming into force but has said she will challenge 'business as usual' and does not accept the notion that 'we are "doing this already"'.[13]

> This Act is just what was needed to unsettle the status quo, ruffle a few feathers, and bring public services back to the purpose they were set up for in the first place – to improve the lives and well-being of people here in Wales, today, and for every tomorrow to come…
>
> …we're open and realistic about the fact that this culture change is not going to happen overnight. As we move through turbulent and ever-changing times, the road towards the well-being goals is never going to be straightforward and easy.
>
> **Sophie Howe**
> **Future Generations Commissioner for Wales, 2016**[14]

12 Auditor General for Wales, Shaping Accountability for Future Generations conference speech, 2016
13 Future Generations Commissioner for Wales, **Well-being in Wales: The journey so far**, 2018
14 Future Generations Commissioner for Wales, Shaping Accountability for Future Generations conference speech, 2016

21 It will be important for public bodies and stakeholders to continue to discuss the scale of change they think is required and the rate of progress that can reasonably be expected. This discussion will foster a greater collective understanding and help shape challenge and accountability for delivering the Act.

Public bodies see the Act as an opportunity to change their culture and improve how they work

22 We have sought to understand how public bodies' perceive the Act. This is because perceptions of the Act will, to a large extent, determine how public bodies respond. We asked public bodies 'how would describe the Act and what it means for your organisation?' We asked whether they saw it as a distraction, unnecessary, an opportunity or a necessity. We explored this as part of our call for evidence and during our interviews.

23 Overall, public bodies described the Act in positive terms. The majority, across all sectors, said that they saw it as an 'opportunity'. This was most commonly because they saw the Act as having the potential to improve 'strategic planning and decision-making' and to 'drive positive change in culture and behaviour'.

24 Many health bodies also described how the Act can add value by encouraging a broader view of how to improve the health of the population, including by tackling health inequalities and increasing the focus on preventative work. They saw the Act as being important in driving a collective response to these challenges. Similarly, fire and rescue authorities highlighted how the Act provides an opportunity to strengthen collaboration and increase preventative work.

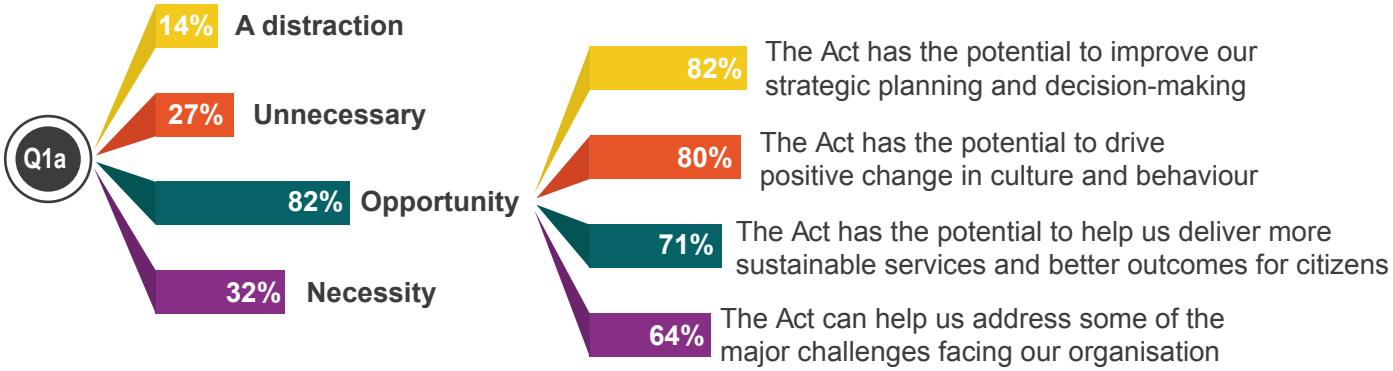
25 Some public bodies went further and said that they saw the Act as a 'necessity'. Health bodies, central government and sponsored bodies and fire and rescue authorities were, proportionally, more likely to describe it in this way. This tended to be because they felt the Act could help deliver more sustainable services and better outcomes for citizens.

26 However, while most bodies said they saw the Act as an opportunity, a few also saw it as 'unnecessary', predominantly because they felt the Act legislates for things they were already doing or seeking to do. They saw it as a reinforcement of or progression from previous policy, legislation or recognised good practice. Nevertheless, bodies were often positive about the opportunity to review what they do and how they do it in light of the Act.

27 Many local authority responses show they feel the Act has affirmed progress they were already making, such as developments in strategic planning and collaboration. Some of these local authorities had been part of the WLGA's 'Early Adopters' programme.[15] While most local authorities were keen to recognise the value of the Act, some also questioned the timing of its introduction. They stated that it would be particularly difficult to implement, given reductions in capacity and resources.

28 Very few bodies said they saw the Act as a 'distraction'. Those that did indicated that it was because they will need to devote time and resources to implementation, rather than because they saw the principles as unhelpful.

Exhibit 1 – Call for evidence. Q1a: How would you describe the Act and what it means for your organisation?[16]



29 While some public bodies may have been applying or working towards the principles of the Act prior to its introduction, their challenge is to reflect on where the Act is pushing them to go further. They will need to reflect on strengths and weaknesses and opportunities to improve how they apply the five ways of working. They will need to consider whether they need to apply the five ways of working more consistently or more systematically.

30 Furthermore, it is important to remember that the five ways of working are not an end in themselves. The ways of working are a means of helping public bodies maximise their contribution to the well-being goals. For example, the fact that public bodies are collaborating is not sufficient; they should also seek to improve the social, economic, environmental and cultural well-being through that collaboration.

15 The WLGA worked with 11 councils and all of Wales' national park authorities as early adopters.
16 Public bodies were able to tick as many boxes as they considered relevant.

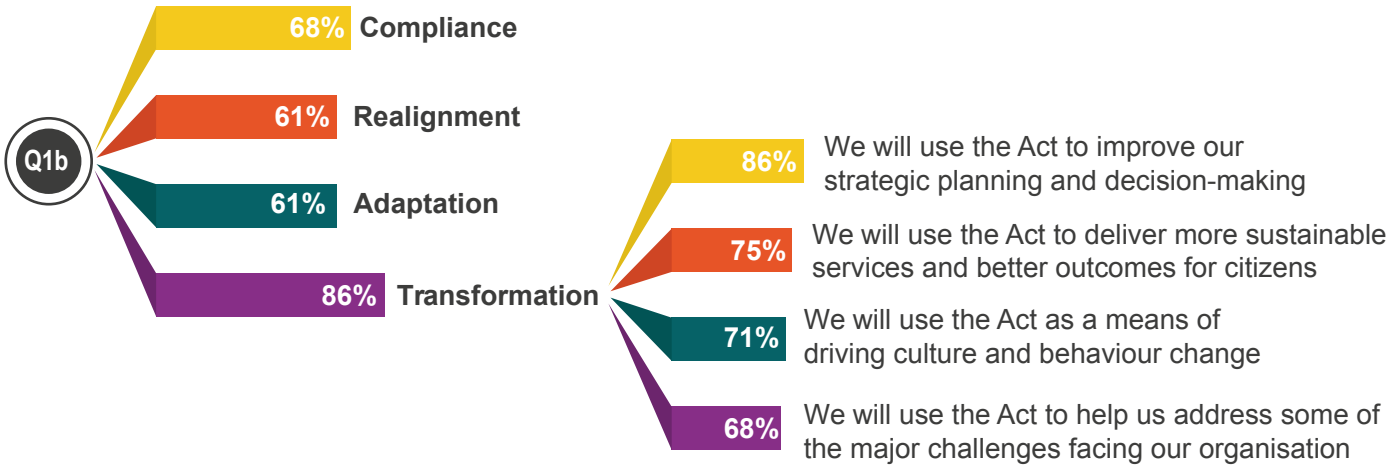
In future work, the Wales Audit Office will distinguish between those bodies that have been making progress in applying the principles of the Act for some time and those that describe themselves as having done so, but have failed to recognise the change it is seeking to bring about.

31 We also asked public bodies 'How would you describe the change you intend to make to deliver the Act?'. We asked whether they intend to focus on compliance, realigning or adapting existing activities or transforming what they do. As with the previous question, we asked this as part of our call for evidence and during interviews.

32 Almost all public bodies appear to have been keen to emphasise that they will ensure compliance in addition to realigning, adapting or transforming what they do. Their responses show that they do not see these categories as being in conflict.

33 While there was a more even spread of responses than for the previous question, public bodies most commonly stated that they would use the Act to help them transform how they work, specifically by improving strategic planning and decision making. They also intend to use the Act to help them address the major challenges they face, deliver more sustainable services and better outcomes and to drive culture and behaviour change.

Exhibit 2 – Call for evidence. Q1b: How would you describe the change you intend to make to deliver the Act?[17]



17 Public bodies were able to tick as many boxes as they considered relevant.

34 Public bodies' responses show that they generally see the Act as an opportunity and recognise it has broad-ranging application. They see it as having the potential for improving what they do and the way they do it.

Public bodies are able to provide examples of how they are using the Act to change how they work, but they are not yet able to describe how they are systematically applying the sustainable development principle

Most public bodies set their first well-being objectives in 2017 and were able to provide some examples of how they applied the five ways of working as part of that process

35 Public bodies were required to set their first well-being objectives by April 2017. The Act prescribed a challenging planning timetable for setting well-being objectives and it is important to remember that none of the 44 bodies were starting with a blank sheet. Some bodies were required to publish their first well-being objectives mid-way through an existing planning cycle. Local authorities, fire and rescue authorities and national park authorities had to meet the requirements of the Local Government (Wales) Measure 2009. They were required to publish their well-being objectives shortly before the local government elections.

36 The timetable has been particularly challenging for public services boards. They were required to publish a well-being assessment by May 2017; to seek the Commissioner's views on their draft objectives; and to consult on and then publish the final well-being plan by May 2018. The fact that individual bodies were required to publish their objectives before public services boards has also been highlighted as barrier to integration by some (see paragraph 50).

37 As a result of these challenges, public bodies took different approaches to aligning or integrating their well-being objectives with existing strategies and corporate objectives. They have tended either to replace their previous corporate objectives with their well-being objectives or set well-being objectives in addition to their corporate objectives.

38 A few bodies chose not to set well-being objectives by the statutory deadline. They have instead stated their intention to publish well-being objectives in the near future rather than create an additional tier of corporate objectives or 'retrofit' the requirements of the Act to existing plans and strategies. Other bodies reviewed their existing corporate objectives against the requirements of the Act and considered them to be fit for purpose or in need of small amendments.

39 A few public bodies said that they intended to revise their well-being objectives soon after setting them. Reasons include:

- new membership in local authorities, following the 2017 local government elections;
- opportunities to align planning processes as other plans and strategies come to an end, such as the Integrated Medium Term Plans in health;
- opportunities to ensure the well-being objectives reflect public services boards' well-being objectives post May 2018; and
- a desire to improve on the process of setting well-being objectives.

40 This will be a continuing area of focus for the Wales Audit Office, given the Auditor General will need to assess how well-being objectives have been set as part of future examination work.

41 We asked public bodies 'How different was the process compared to the process for setting corporate objectives in the past?'. We asked them whether the process was the same, whether they did some or several things differently or whether they made significant changes.

42 No public bodies said the process was the same as for previous years. Most said that they had done some or several things differently. Few said that they felt the process was much improved compared to previous years.

Exhibit 3 – Call for evidence. Q2a: Your organisation has set, or is in the process of setting, well-being objectives. How different was the process compared to the process for setting corporate objectives in the past?

43 While bodies most commonly indicated that they did some or several things differently, they often failed to give a detailed explanation of 'how' or provide specific examples of how all of the five ways of working have been applied. References to how the five ways of working have been applied tended to relate to collaboration, involvement or integration.

44 Most local authorities said that they had drawn on work they had done through the public services boards to help them develop their well-being objectives. They described how they had used the Public Services Board's well-being assessment as part of their evidence base, as did some health bodies.

45 Most local authorities made reference to how they had engaged the public in developing their well-being objectives. It was not always clear how this differed from engagement and consultation they had undertaken in the past. However, some described how they had drawn on the engagement undertaken by the Public Services Board as part of the development of the well-being assessment.

46 Most health bodies said they had engaged internal and external stakeholders as part of the process of developing their well-being objectives, though few made reference to engaging the public (beyond drawing on the results of any engagement included in the well-being assessment). A few said they intended to undertake greater involvement when they revise their well-being objectives.

47 Similarly, central government and sponsored bodies tended to involve staff and stakeholders in the development of their well-being objectives and some stated that they had involved a wider circle than they had in previous years. However, only a few of these bodies directly involved the public in developing their well-being objectives, though others have since launched large scale public engagement processes.

48 Some bodies said that they had taken a more 'integrated' approach by involving different internal and external stakeholders to help them identify how they could make a broader contribution across the well-being goals. However, the Commissioner's analysis of well-being objectives found that:

> 'Overwhelmingly, objectives have a tone of improving the economic and social well-being of localities, with little emphasis on the environment or culture – despite the need to demonstrate how well-being objectives contribute to each of the seven goals.'

49 Therefore, while public bodies may feel that they have improved the process, this has not necessarily resulted in well-being objectives that reflect all of the aspects of well-being.

50 Some bodies, notably health bodies, made reference to the statutory timetable and the fact that it poses a challenge to collaboration and integration, given that it requires individual bodies to publish their well-being objectives before public services boards publish theirs. A few said they intend to review their own well-being objectives following the publication of the Public Services Board's objectives.

51 There was limited information on how public bodies had used the 'long term' way of working to help them set their well-being objectives and less on 'prevention' (notwithstanding this may be implicit, given the references to drawing on Public Services Board's well-being assessments[18]). However, there are references to preventative activities within plans. They include references to delivering the Social Services and Well-being Act (Wales) 2014 and aligning the two piece of legislation at a local level. Fire and rescue authorities, in particular, emphasised that prevention is a well-established and successful way of working for them and gave examples, such as work with health and police partners on falls prevention and home fire safety. However, while public bodies may be undertaking preventative work, it is generally unclear how they have taken prevention into account as part of the process of developing their well-being objectives.

52 While public bodies may feel they have applied the five ways of working to a greater extent, it is not always clear how the process was different or what has changed as a result. The Commissioner's analysis highlights that:

> 'At the moment, public bodies are committing to well-being objectives that largely resemble the corporate objectives they would have set prior to 2017.'

53 The Commissioner has also concluded that well-being statements 'are not yet transparent and that makes it difficult to build up trust with others and enable them to meaningfully get involved in the business of the organisation'. The Commissioner expects public bodies to involve people in writing these reports so that they are more accessible in future.[19]

18 The Future Generations Commissioner for Wales has previously highlighted weaknesses in how well-being assessments have taken account of future trends. The report 'Well-being in Wales: Planning today for a better tomorrow' states that 'The majority of assessments did not meaningfully consider the long-term, future trends or multigenerational policy challenges' and 'implicit messages from the data needed further exploration to better understand the causes and effects of key issues and trends'. Future Generations Commissioner for Wales, **Well-being in Wales: Planning today for a better tomorrow**, 2017

19 Future Generations Commissioner for Wales, **Well-being in Wales: The journey so far**, 2018

In future, the Wales Audit Office will expect to clearly see how the sustainable development principle and five ways of working have been used to determine a public bodies' well-being objectives.

The Wales Audit Office will assess the extent to which all of the five ways of working are being considered and applied systematically through the process of setting well-being objectives. The ways of working should not be seen as a hierarchy or as unrelated to each other.

RESOURCE

Making a Difference: Investing in Sustainable Health and Well-being for the People of Wales

Public Health Wales produced the report 'Making a Difference: Investing in Sustainable Health and Well-being for the People of Wales', which offers research evidence and expert opinion in support of preventing ill health and reducing inequalities to achieve a sustainable economy, thriving society and optimum health and well-being for the present and future generations in Wales.

View the report here.

Public bodies are beginning to take steps to apply the sustainable development principle across their work

54 As already described, public bodies, Public Services Board members and local authorities in particular, have, in general, devoted time and capacity to ensuring they meet the statutory timetable for publishing well-being objectives, well-being assessments and developing well-being plans.[20]

55 However, in order to deliver on the spirit and ambition of the Act, public bodies need to consider how they carry out sustainable development in everything they do. We asked public bodies to tell us what they were doing to embed the sustainable development principle in other areas of work.

20 Local authorities, fire and rescue authorities, health boards and Natural Resources Wales are the statutory members of public services boards. Further details on public services board membership.

56 The activity they described broadly falls into the following categories:

- culture and behaviour change
- governance
- strategic planning, performance and risk management
- project/ service delivery

57 Most bodies gave examples of how they had sought to improve awareness and understanding of the Act. This was generally through training, such as:

- inclusion in corporate induction for staff, board members or elected members;
- inclusion in leadership and management programmes; or
- specific training for staff, board, cabinet or committee members.

58 Beyond this, there were limited examples of how public bodies have sought to begin to change culture and behaviour. Some bodies made reference to:

- using mentors or critical friends to provide advice and help promote the five ways of working;
- encouraging individuals to assess or reflect on how they are applying the five ways of working;
- gathering and sharing case studies to make the Act 'real' for people in different parts of the organisation and help them apply it in their day-to-day roles;
- developing ways of recognising and rewarding the application of the five ways of working; or
- making managers accountable for delivering outcomes so that they see their responsibilities as cross-cutting.

Public bodies will need to consider how they can best 'drive positive change in culture and behaviour', given they see this as one of the main opportunities afforded by the Act (see paragraph 23 and example of how Welsh Government is seeking to develop people, leadership and culture).

CASE STUDY

Developing people, leadership and culture at Welsh Government

The Welsh Government refreshed its learning and development programme last year to ensure the Act is represented in induction, leadership and more specialist training. The Permanent Secretary has since initiated a wider review of the performance management, progression arrangements, leadership training and other development programmes. The 'future-proofing initiative' will take a fresh look at how Welsh Government manage, recognise, develop and reward people, putting the Cabinet's delivery priorities and the five ways of working at the heart of what is expected of teams and individuals. All recruitment exercises to the senior Civil Service now require candidates to have a knowledge and understanding of the Act as the context for our work. The initiative is focused on developing a capable, confident and resilient civil service that can work in new ways, collaborate across traditional portfolio boundaries and involve stakeholders and citizens to achieve better outcomes for Wales.

59 Some bodies, in particular, local authorities, gave examples relating to governance. This perhaps reflects public bodies' view that the Act provides an opportunity to improve decision making (see paragraph 23 and 33). It might also reflect the fact that making changes to governance arrangements may help affect change across large organisations.

60 Some local authorities, central government and sponsored bodies and a few others made reference to impact assessment tools. These are often referred to as 'Integrated Impact Assessments' or 'Well-being Impact Assessments' and they seek to integrate sustainable development into the planning and decision-making process. They build on processes that have been developed to assess the impact that changes in policy or practice might have on areas such as equality, children's rights or environmental sustainability. As with all impact assessments, it is important for those public bodes who use them to ensure that:

- they are undertaken from the start, rather than towards the end of the process;
- there is a good quality evidence base, which includes quantitative and qualitative information (underpinned by effective involvement);
- they draw on the skills and knowledge of a range of individuals;
- they are designed to support genuine reflection and they are seen as a means of generating ideas for improvement, as well as mitigating negative impacts;

- there is challenge or quality assurance;
- they are genuinely taken into account as part of decision making and scrutiny; and
- the results and mitigations are monitored.[21]

CASE STUDY

Developing a Well-being Impact Assessment at Denbighshire County Council

Denbighshire Council has developed an online and interactive Well-being Impact Assessment that links research to evidence. The approach consists of a series of questions that challenge people to reflect on their approach and find ways to embed the sustainable development principle. Next, people are asked to consider what the impact is likely to be across a range of themes and issues. People are encouraged to complete it as a group, involving staff at different levels from different services and even partners.

What have you learned?

As a result of the new approach, we are seeing a more thorough approach to impact assessments. Members have better quality and more balanced information and residents have transparent and detailed information to challenge us on our decisions. This has led to proposals changing course; with a renewed focus on community involvement. The new approach is leading to culture change in our organisation: we are growing in awareness of the impact of what we do.

How do you intend to continue developing the Well-being Impact Assessment?

We are continuing to take an action-learning approach as our Well-being Impact Assessment matures. We are planning to share the website by making it freely available for communities to use.

21 Further information and transferrable learning points can be found on the NHS Equality Impact Assessment Practice Hub

61 Other governance changes included updating decision or committee report templates and business plan templates or updating documents such as the Constitution, Code of Corporate Governance or Code of Conduct.

62 Very few bodies made explicit reference to the seven areas 'where the change needs to happen' that are set out in statutory guidance.[22] However, there were references to changes to planning, performance or risk management, as well as workforce planning (see relevant paragraphs on culture and behaviour change).

63 Some bodies have sought to incorporate the requirements of the Act into their service and business planning by, for example, changing templates or guidance and updating self-evaluation processes. A few bodies also referred to updating risk management strategies and risk registers to reflect the well-being goals.

64 In addition, there were a small number of references to reflecting the well-being goals and five ways of working in:

- grants, procurement and commissioning arrangements
- transformation/ change programmes
- capital bidding and business cases for investment.

65 Most bodies gave practical examples of how they were applying the five ways of working in project or service delivery. In general, these examples predated the Act, but the bodies felt they were nonetheless a good representation of how the Act could be put into practice. There were a few examples where bodies had explicitly considered the goals and five ways of working.

CASE STUDY

National Parks Wales: Together for health and well-being

The three national parks in Wales describe themselves as 'health assets' in recognition of how they can help individuals and communities maintain or improve their health and well-being. They are working together and with other partners to raise awareness of the health and well-being benefits of the parks, develop evidence-based policy and practice and maximise opportunities for people to access the natural environment. Further information and details on projects can be found on the national parks' website

22 The seven areas are corporate planning, financial planning, workforce planning, procurement, assets, risk management and performance management. Welsh Government, **Shared Purpose: Shared Future Statutory Guidance on the Well-being of Future Generations (Wales) Act 2015**, 2016

CASE STUDY

Arts Council of Wales, Ideas: People: Places

The Arts Council has set up the 'Ideas: People: Places' programme, which comprises seven place-based projects across, funding a local consortium of organisations (including organisations they have not worked with before such as Housing Associations and commercial developers) to work with local communities to re-imagine their local area over a three-year period. They have sought to challenge their usual methodologies and have seen outcomes change as a result.

How has applying the five ways of working helped you?

The programme was about working in localities to build on communities' assets. The five ways of working provided the perfect legislative framework for this. It encouraged us to be bold and test out a pioneering approach and made it possible for us to approach other public bodies to become partners.

What have you learned?

We want to go beyond working 'with' communities to supporting work 'by' communities. This is a key theme for us – opening up from the top down, patriarchal, bureaucratic approach to be more inclusive and representative.

We learned we need to resist the urge to achieve outcomes quickly by defining them ourselves and then throwing money at them. Making funding available over a three-year period without defining outcomes and processes helped achieve unanticipated outcomes and cost a lot less than something planned in the usual way.

Working with new partners highlighted that we have built institutional processes and procedures that do not make partnership working easy. However these kinds of issues are ultimately helpful when they surface as they can be addressed and designed out in the future.

Creativity is very important in regeneration work. So often we are missing opportunities to design out our current issues and problems for future generations and involve residents in creating the spaces that they want to live, work and play in.

66 A few bodies told us that they have put arrangements in place to develop, oversee and implement their approach to the Act. This includes measures such as identifying a senior level champion, establishing a board or steering group, assessing their 'preparedness' and developing action plans.

67 Some bodies were open about the fact that they still had work to do to continue developing and improving their approach to implementing the Act. Others went further, explaining that the work they had done to date had been about putting the building blocks in place and their next steps would focus on culture change and service delivery.

68 A few bodies referred to the lack of time and space to reflect, given pressures on capacity and the Act's planning timetable. Some view the planning and reporting requirements as traditional and as being at odds with the policy intention. Some think the legislation could drive a compliance focus, rather than stimulating the innovative and outcome-focused response that is hoped for. There is also some concern that external review, whether undertaken by the Wales Audit Office, the Commissioner or other inspection and regulation bodies could drive a compliance focus (see also paragraph 89).

69 The Auditor General recognises and appreciates the range of internal and external challenges which make implementing new legislation difficult. However, there is a risk that for some, the Act is perceived as 'another thing to do'. Unless those bodies and individuals adopt a mindset where they see sustainable development as an approach that can help them address major budget and service challenges, rather than an additional burden, they will be unable to make the most of the opportunity the Act affords.

The Auditor General has been clear that it will take time for public bodies to fully apply the principles of the Act. The Wales Audit Office welcomes honest self-reflection on progress and will take account of the fact that it will take time for bodies to thoroughly consider how to apply the Act and deliver real and meaningful change. Over the medium and long term, the Wales Audit Office will expect public bodies to be able to demonstrate how the Act is shaping what they do.

The Auditor General's future examination work will assess the extent to which public bodies are applying the sustainable development principle. It will focus on how public are applying the ways of working and will not focus on the application of specific processes or on compliance with the planning and reporting timetable.

CASE STUDY

Cardiff and Vale University Health Board's 'Wellbeeing Project'

Cardiff and Vale UHB are establishing a Bee Garden in the Orchard at University Hospital Llandough (UHL) with multiple benefits. The project will be developed in collaboration with staff, patients, carers, school children, and academics in health to support the UHB's approach to developing sustainable futures.

The landscape, design, and planting of specific flowers will enable local researchers to test for the link with antibacterial strength honey, building on the work of Professor Les Bailleand and his colleagues from the School of Pharmacy, College of Biomedical and Life Sciences, Cardiff University. They have identified a number of novel plant-derived antibacterial compounds in honey that killed antibiotic resistant hospital super bugs, such as MRSA. With the largest NHS Research & Development team in Wales, there may also be opportunities for trials of the potential therapeutics across Cardiff and the Vale of Glamorgan.

The project will enhance the biodiversity of the Orchard and support the pollination of the trees. Bees are an essential aspect of a healthy orchard, ensuring everyone on the UHL site and the local community have access to space that will enhance the benefits of health and well-being, while supporting patients on their journey of recovery and rehabilitation.

CASE STUDY

Natural Resources Wales: Coordinating collaboration and engagement on the Gavenny River

The Gavenny River is a short river in South East Wales flowing from its source through Abergavenny and into the Usk Special Area of Conservation. Evidence suggests the river is failing to achieve its required GOOD status as set out by the Water Framework Directive. Natural Resources Wales collaborated and engaged with the local community who showed a significant interest and willingness to be involved in finding solutions to environmental pressures. The opportunities that emerged were not limited to water quality improvements alone, with people showing an interest in developing and managing adjoining habitats for conservation and amenity value.

Bringing a wide range of stakeholders together broadened the outputs and added significant value. Stakeholder-led sustainable land management options were incorporated into Natural Resources Wales' Flood Risk Management maintenance schedules. The project delivered multiple benefits, such as the sustainable management of an area of urban greenspace, donation of felled timber to the local woodland group and local forest school for woodland craft and resale as well as improving the resilience of the ecosystem.

CASE STUDY

Social Prescribing in Torfaen

Social prescribing provides an intervention that seeks to address patients' requirements for non-medical support in the community. Torfaen's model of social prescribing was developed in response to a need to better connect primary care with a range of services that exist across the community and public sector to tackle the underlying causes of ill health and promote self-help. It is a partnership between the Aneurin Bevan University Health Board and Torfaen County Borough Council.

The service is based in GP surgeries so it is positioned as a viable alternative to medical intervention. There are 'social prescribers' based within each participating practice for half a day a week. They receive referrals from anyone based in primary care or from patients themselves. The referral criteria covers anyone experiencing a social issue that is impacting on their physical and / or mental health. Referrals are then made to community services and broadly fall into the following categories:

- healthy lifestyle
- family and early years
- health protection and personal safety
- welfare
- self-care and independent living
- work, learning and skills
- community development and leisure

Many of the individuals accessing the service are vulnerable with complex circumstances. Underlying needs are identified through a reciprocal conversation, the outcomes they want are co-produced and they are helped to understand how they, with support, can take action to achieve them.

Public bodies need to set out how they will continue developing their approach to the Act so that they can deliver on the ambition and maximise the opportunities it affords

Public bodies have identified some actions to continue embedding the Act but they are unclear about how they will measure changes in culture and ways of working

70 While recognising it will take time to effect meaningful change, we were keen to understand what public bodies plan to do to continue embedding the sustainable development principle.

71 We asked them to describe what success would look like. This question was interpreted in a variety of ways and elicited a range of responses. Some bodies referred to formal performance monitoring. They tended to suggest that fully embedding the sustainable development principle would result in improvements in outcomes, which would be the main measure of success. They referenced the measures they have put in place for their well-being objectives or existing measures, such as the national indicators or Public Health Outcomes Framework.[23] [24] [25]

72 Others chose to describe what the organisation would look and feel like and how they would work differently. Their examples included:

- different types of questions and challenge at board, cabinet, scrutiny and committee meetings;
- improved understanding of sustainable development and the sustainable development principle across the organisation, demonstrated by widespread application as part of people's day-to-day roles;
- better relationships with communities and improved community resilience;
- more sustainable services, workforce and finances;
- changing to service models that are more person-centred and preventative; and
- increased integration with partners, including through shared assets, pooled resources and joint initiatives.

23 See also the Future Generations Commissioner for Wales, **Well-being in Wales: The journey so far** 2018 and the Commissioner's expectations of how public bodies will measure and report on progress towards well-being objectives and the effectiveness of steps to meet them.
24 Information on the national indicators.
25 More information on the Public Health Outcomes Framework.

73 In general, public bodies did not provide a specific description of how they would assess their progress in applying the sustainable development principle. Public bodies did not, by and large, describe how they intended to measure change in behaviours and working. However, there were a few examples and references to plans to capture narratives and case studies. Measuring behaviour change is difficult, but it will be important for bodies to obtain some insight into how much progress they are making in applying the sustainable development principle. An example of how Aneurin Bevan University Health Board is seeking to understand how staff are applying the sustainable development principle is given below.

CASE STUDY

Aneurin Bevan UHB's Well-being of Future Generations Act Self Assessment Tool

As part of its overarching Well-being of Future Generations Act Embedding Programme, ABUHB has developed a self-assessment process to help it embed the Act across its work. It has set out 'ambition statements' that describe how each division and function should apply the five ways of working over the long term. Divisions and functions then use the self-assessment to help them understand where they are in relation to these statements so that can identify what they can do, individually and collectively, to make progress.

The self-assessment process is underpinned by a number of important design principles including:

- the ambition statements will be co-created and owned by NHS professionals;
- the process is not intended to be an assessment of performance or compliance;
- the self-assessment will be a mechanism for teams and individuals to explore best practice, opportunities and barriers;
- the whole process should add value and become embedded into routine planning;
- the process will be an important mechanism to raise awareness and understanding of the Act; and
- it should not be a one-off exercise but used as a way to encourage continuous improvement.

ABUHB focused the self-assessment on its enabling divisions, such as Finance, Workforce and Organisational Development and Facilities, for the first phase. Patient-facing divisions and other functions are part of phases 2 and 3, scheduled for 2018-19 and 2019-20.

74 When asked how they were going to deliver the change needed, most public bodies' answers related to the categories previously identified; culture and behaviour change, governance, strategic planning, performance and risk management or project/ service delivery.

75 Some bodies stated that they intended to continue progressing work in these areas. For example, they plan to continue:

- improving their impact assessments and updating report templates;
- embedding the Act into service planning and performance management frameworks and guidance;
- training and awareness raising, including extending training to new groups of elected members, board members or staff; or
- developing key strategic documents; a few bodies referenced their intention to develop shared objectives.

Similarly, other bodies stated that they would commence work in these areas.

76 A few bodies gave examples of projects or initiatives they planned to take forward, which they felt reflected the Act.

77 There were also some specific references to the five ways of working. A few bodies described how they intended to change their relationships with communities and improve community resilience. Smaller sponsored bodies tended to provide actions relating to improving or developing mechanisms that support collaboration or involvement. This included finding an effective means of engaging with public services boards. While they recognise the opportunity, there are significant constraints on their capacity to engage with all 19 (see paragraph 83).

78 A few bodies provided more detail on future plans or emphasised priority areas and activities.

79 Given the challenges that have already been outlined, the general lack of clarity and detail on how public bodies will drive this work forward and assess their progress might be expected. However, they will need to give more consideration to these questions if they are to use the Act to 'transform how they work' (see paragraph 33).

There are challenges to implementing the Act and stakeholders have a role in helping to address them

80 Public bodies identified a number of external barriers, which other stakeholders should take account of or look to address. Short term funding was, emphatically, the most common barrier they identified. Public bodies were clear that it hampers their ability to plan effectively over the long term. Some sponsored bodies stated that the annual remit letter poses the same challenge. Linked to this, they cited a lack of flexibility over how grant funding can be spent and disproportionate monitoring requirements as inhibiting long term planning and a focus on outcomes.

81 Some bodies also described the challenge of legislative complexity and the difficulty of joining-up statutory requirements in practice. Specifically, they referred to the need to find a practical means of meeting the requirements of the Act whilst also meeting the requirements of the Social Services and Well-being (Wales) Act 2015, the Environment (Wales) Act 2016 or planning legislation. A few suggested that legislative complexity and the 'burden' of meeting multiple requirements could result in a compliance-based response.

82 There were some concerns about existing national reporting requirements and a focus on indicators, which were considered to detract from a focus on long term outcomes and preventative benefits. In addition, a few bodies expressed concerns that audit and regulatory requirements could drive a focus on compliance with a process, rather than promoting the spirit of the Act (see paragraphs 68, 88 and 89).

83 Public bodies were mostly positive about the opportunity afforded by public services boards. However, they also highlighted some challenges that need to be overcome if they are to be as effective as intended. These included:

- the complexity of the partnership governance environment. This has resource implications for bodies that need to support multiple partnerships, including multiple public services boards and Regional Partnership Boards. Being represented at or influencing each Public Services Board is resource intensive or, for some, not possible.[26]
- some potentially influential partners are not yet engaged in public services boards.

26 In April 2016, seven statutory regional partnerships came into being under the Social Services and Well-being (Wales) Act 2014. Their purpose is to drive the strategic regional delivery of social services in close collaboration with health.

- the different levels of commitment from different members of public services boards.
- public services boards have different ways of working, which can be difficult for bodies that are members of multiple public services boards.

84 Furthermore, a number of bodies stressed that these challenges are amplified by diminished and diminishing resources, pressure on leadership capacity and reductions in capacity across organisations.

85 Public bodies said that they would value the following external support to help them further embed the Act:

- practice sharing, including on how the five ways of working are being applied, sharing of examples with demonstrable benefits or return on investment and more sharing at a national level and across sectors;
- training, including on behaviour change techniques and applying the five ways of working;
- guidance on 'the areas where change needs to happen'; corporate planning, financial planning, workforce planning, procurement, assets, risk management and performance management (as set out in statutory guidance);
- more focused support and advice to public bodies on their well-being objectives, similar to that which public services boards receive; and
- facilitation of wider engagement and more joint learning across Public Services Board members.

86 The Act gives public bodies in Wales a common purpose and requires a collective effort. Public bodies will need to develop a long term approach if they are to effect the level of change the Act requires and they say they recognise. Furthermore, external stakeholders, Wales Audit Office included, will need to consider how they can play their part in removing barriers and providing the necessary support.

87 One way that external stakeholders can do this is by creating space for innovation, allowing for 'failure' and recognising learning. The Auditor General has continued to emphasise the importance of well-managed risk taking.

‘So long as they [public bodies] go into developing services and trying new things understanding the risks; having identified them and taken steps to manage them as well as they can, then I as Auditor General will not be seeking to cast blame. Rather, I will be seeking to find ways that we can learn from both failure and success.’

Auditor General for Wales
Risk taking in the public sector, 2017[27]

88 The Commissioner has already provided challenge and support to Welsh Government on a number of national policy areas in order to help give public bodies ‘more freedom to apply the Act’.[28] Examples of this are included in **Well-being in Wales: The journey so far**.

89 The Auditor General has worked collaboratively with public bodies to develop a proportionate and meaningful approach to his examinations which adds value and promotes learning. He has continued to reinforce that his examinations will not be about complying with a checklist. They will instead seek to understand ways of working, reflecting his duty and the spirit of the Act.

90 The Auditor General will undertake examinations across the 44 bodies in 2018-19 and 2019-20. This work will focus on the steps that public bodies are taking to meet their well-being objectives. It will explore how bodies are applying sustainable development principle in this context. The examinations will inform the Auditor General’s first statutory report under the Act, which will be laid before the National Assembly for Wales in 2020.

27 Auditor General for Wales, Risk taking in public sector, 2017 www.youtube.com/watch?v=NRhT_ppMenbM
28 Future Generations Commissioner for Wales, **Well-being in Wales: The journey so far**, 2018

It is a journey in which I'm engaged, you're engaged and Sophie is engaged…

… We're needing to find our way as auditors as well, to develop an approach that makes sense and which helps the whole of the public sector. So, I am with you, I am not working outside and looking in.

Huw Vaughan Thomas
Auditor General for Wales, 2016[29]

So it is trust; trust that we are working together on that journey and, from us, a verification that that journey is taking place and that we are sharing with you.

Huw Vaughan Thomas
Auditor General for Wales, 2016[30]

29 Auditor General for Wales, Shaping Accountability for Future Generations conference speech, 2016.
30 Auditor General for Wales, Shaping Accountability for Future Generations conference speech, 2016.

Appendix 1: Year one commentary: call for evidence questions

Question 1: The Well-being of Future Generations Act became law in 2015 and the main provisions, including the well-being duty, came into force from April 2016.

1a How would you describe the Act and what it means for your organisation? Please tick as many boxes as you consider relevant.			
A	A distraction	The Act will not help us address the major challenges facing the organisation.	
		We will need to devote time and resources meaning there is a cost and an opportunity cost to the organisation.	
B	Unnecessary	The Act doesn't offer a new or useful way of viewing what we do or how we work.	
		Much of the Act is sensible and valuable but it legislates for things we were already seeking to do.	
		Much of the Act is sensible and valuable but it legislates for things we were already doing.	
C	Opportunity	The Act can help us address some of the major challenges facing our organisation.	
		The Act has the potential to improve our strategic planning and decision-making.	
		The Act has the potential to help us deliver more sustainable services and better outcomes for citizens.	
		The Act has the potential to drive positive change in culture and behaviour.	
D	Neccesity	We need the Act to help us address some of the major challenges facing our organisation.	
		We need the Act to improve our strategic planning and decision-making.	
		We need the Act to help us deliver more sustainable services and better outcomes for citizens.	
		We need the Act to enable us to deliver the right culture and behaviours.	
E	None of the above		

1a Please provide any explanatory comments on the above.

Answer 1a

1b How would you describe the change you intend to make to deliver the Act? Please tick as many boxes as you consider relevant.			
A	Compliance	We will ensure we meet key statutory requirements and that we can demonstrate we have done so.	
B	Realignment	We will ensure the changes we were/are planning to make are aligned to the Act.	
C	Adaptation	We will use the Act to help us reconsider how we work and what we are seeking to achieve.	
		We will use the Act as a means of helping us make progress in areas where we need to make improvements.	
D	Transformation	We will use the Act to help us address some of the major challenges facing our organisation.	
		We will use the Act to improve our strategic planning and decision-making.	
		We will use the Act to deliver more sustainable services and better outcomes for citizens.	
		We will use the Act as a means of driving culture and behaviour change.	
E	None of the above		

1b Please provide any explanatory comments on the above.

Answer 1b

Question 2a: Your organisation has set, or is in the process of setting, well-being objectives. How different was the process compared to the process for setting corporate objectives in the past?			
A	The process was the same.	The process was the same as the process for setting corporate objectives in previous years in your organisation.	
B	We did some things differently.	We will ensure the changes we were/are planning to make are aligned to the Act.	
		We made some changes to better reflect the five ways of working.	
C	We did several things differently.	We made some notable improvements as a result of the Act, applying the five ways of working.	
D	We made significant changes.	We applied the five ways of working to a far greater degree as a result of the Act.	
		Having made significant changes, we feel the process for setting well-being objectives was much improved on the process for setting corporate objectives in previous years.	
E	None of the above		

Question 2b:

If you answered A or E, please explain why.

If you answered B-D, please describe what was/is different about this process compared to the process for setting corporate objectives in the past and what impact it had. Please make reference to how you applied the five ways of working.

Answer 2b

Question 3: Other than applying the sustainable development principle when setting your well-being objectives, what other key actions have you taken to embed the sustainable development principle in how you work and what impact are they having? Please focus on the key actions you would like to bring to our attention.

Answer 3

Question 4a: What are the key actions you intend to take to continue embedding the sustainable development principle in how you work? Please focus on the key actions you would like to bring to our attention.

Answer 4a

Question 4b: How will you know that you have embedded the sustainable development principle in how you work? Please describe this in terms of the impact you would expect to see.

Answer 4b

Question 5: Are there any internal barriers to implementing the Act and embedding the sustainable development principle, and if so, what are they? Please make reference to the main internal barriers.

Answer 5

Question 6: Are there any external barriers to implementing the Act and embedding the sustainable development principle, and if so, what are they? Please make reference to the main external barriers.

Answer 6

Question 7: What external support would help you further embed the sustainable development principle?

Answer 7

Question 8: Are there any examples of practice you would like to share with us that have not already been referenced? These could relate to service or project delivery or to governance and corporate processes. They could relate to your own organisation or to a collaborative project.

Please feel free to attach any relevant documents or case studies.

Answer 8

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Public Accounts Committee

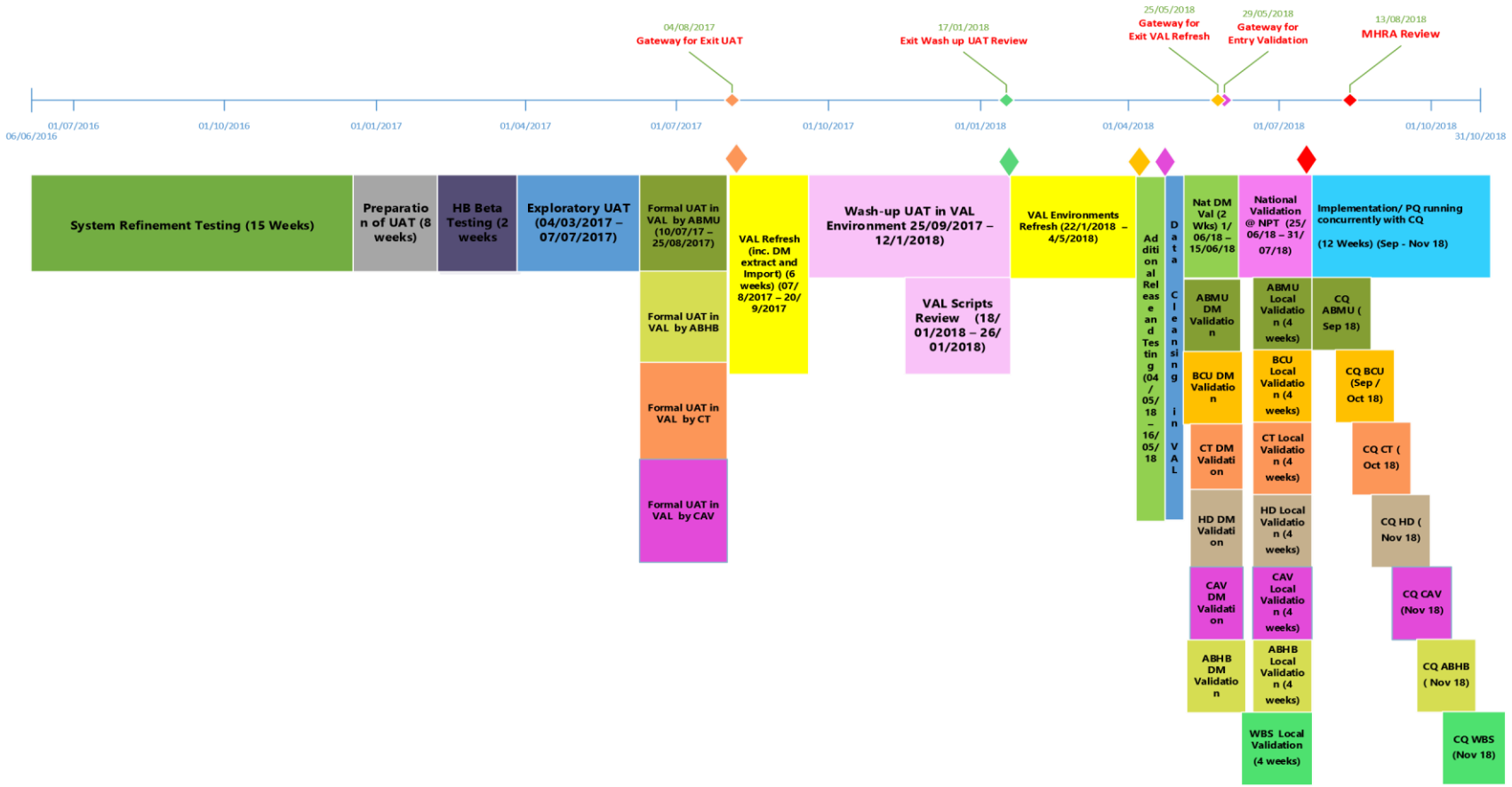
Inquiry into NHS Wales Informatics Services

Additional information from Aneurin Bevan University Health Board on Blood Transfusion TimeLine (10 May 2018)

To date, ABUHB, have incrementally implemented the following laboratory disciplines: Haematology, Bio-Chemistry, Microbiology, Cytology, Histopathology and Mortuary. The outstanding discipline for ABUHB is Blood Transfusion. This remains an outstanding item for all Health Boards in Wales. The attached document illustrates the implementation path for Blood Transfusion onto LIMS and ABUHBs place in this implementation order across Wales.

The Health Board will require delivery of an All Wales Pathology Legacy Data Repository before being able to decommission the two local systems. NWIS are in the planning and design stage for this.

Update: 23/04/2018 (Latest BT Project Timeline



Update: 23/04/2018 (Latest BT Project Timeline

ACTIVITY	START	END	NOTES
All Wales HB UAT	03/04/2017	02/06/2017	All Health Board finished UAT finished testing 02/06/2017
VAL Environment Refresh	04/08/2017	25/09/2017	Refresh the VAL from PROD Environment (including other associated works)

TelePath and Masterlab (Data Migration) data extraction import	11/09/2017	25/09/2017	Verification required prior to Validation extract
Washup UAT	25/09/2017	12/01/2018	• Finish the HBs Testing • Testing in Patch .28 • Testing of Quarantine of Pack
Gateway review for exit washup UAT	17/01/2018	17/01/2018	• UAT sign off by Health Board • Validation Documentation in Haemonetics • Validation Scripts & URS signed off • Other Docs regards to Environments
Dry Run Validatin Scripts	18/01/2018	26/01/2018	Dry Run the Validation Scripts at NPT
VAL Environment Refresh	22/01/2018	04/05/2018	Environment refresh in Prod and VAL

Gateway for Exit VAL Refresh	08/05/2018	08/05/2018	Review the Test outcome in Refreshed VAL: • Non-BT Regression • BT Regression • UAT Supplementay Testing
Additional Release and Testing	09/05/2018	27/05/2018	• Agreed any outstanding issue from UAT • Testing the additional release

Update: 23/04/2018 (Latest BT Project Timeline

ACTIVITY	START	END	NOTES
			• Create Supplementary Report • Interrim Validation Report
Gateway for entry Validation	29/05/2018	29/05/2018	• Review the Supplementary Test Report.

Data Cleansing in RVAL	30/05/2018	31/05/2018	data cleared from RVAL in readiness for Validation
Data Migration Validation	1/06/2018	15/06/2018	National & Local Data Migration Validation (DM Technical Validation & Record comparison)
National Validation	18/06/2018	20/07/2018	Running written validation scripts at Neath Test Lab leaded by Barbara Sullivan
Local Validation	16/06/2018	10/08/2018	Local Validation inc. Analyser interface, Haemonetics, Additional local validation, WCP
MHRA Visit	13/08/2018	15/08/2018	MHRA Visit (3 Days)
Data Migration Go Live top up extract	16/08/2018	19/08/2018	
ABMU Go-Live	20/08/2018	31/08/2018	

Data Migration Go Live top up extract	1/09/2018	2/09/2018	
BCU Go-Live	3/09/2018	14/09/2018	
Data Migration Go Live top up extract	15/09/2018	16/09/2018	

Update: 23/04/2018 (Latest BT Project Timeline

ACTIVITY	START	END	NOTES
CT Go-Live	17/09/2018	28/09/2018	
Data Migration Go Live top up extract	29/09/2018	30/09/2018	

HD Go-Live	01/10/2018	12/10/2018	
Data Migration Go Live top up extract	13/10/2018	14/10/2018	
CAV Go-Live	15/10/2018	26/10/2018	
Data Migration Go Live top up extract	27/10/2018	28/10/2018	
ABHB Go-Live	29/10/2018	09/11/2018	
WBS Go-Live	12/11/2018	23/11/2018	

Y Pwyllgor Cyfrifon Cyhoeddus / Public Accounts Committee
PAC(5)-15-18 PTN3

Grŵp Yr Economi, Sgiliau a Chyfoeth Naturiol
Economy, Skills and Natural Resources Group

Llywodraeth Cymru
Welsh Government

Nick Ramsay AM

Chair
Public Accounts Committee
National Assembly for Wales
Cardiff Bay
Cardiff
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Eich Cyf/Your Ref:
Ein Cyf/Our Ref:

23 May 2018

Dear Chair

Challenges of Digitalisation

Thank you for your letter of 25 April in which you requested additional details following my letter to you of 4 April 2018. For ease of reference, I have set out each of your questions below together with my response.

Question 1 - The Committee notes the detail in your response about how the Welsh Government is utilising the Government Digital Service (GDS) Digital, Data and Technology (DDat) procurement frameworks. However, we would like more detail on why other Welsh public services are not adopting the more agile approach that the NHS in England, in particular, or the digital sector in UK Government have opted for. We are concerned that many Welsh public services are continuing to follow the traditional large, long-lead-in-time procurement contracts which given the Welsh Government has moved away from, we would have expected the rest of the public sector in Wales to follow.

The Digital Outcomes and Specialists (DOS) framework came into existence in February 2016. A summary of the total spend through DOS per Lot since its commencement, for all UK organisations including the Welsh Public Sector (up to 31 December 2017), is shown in the following table:

BUDDSODDWYR MEWN POBL | INVESTORS IN PEOPLE

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	Digital Outcomes	Digital Specialists	User Research Participants	User Research Studios		% Total
UK Central Government	£110,022,397	£69,457,717	£805,371	£1,384,817	**£181,670,302**	**88.7%**
Devolved Administrations (Wales, Scotland and Northern Ireland)	£8,063,925	£473,006			**£8,536,931**	**4.2%**
Education (England)	£241,345	£135,066			**£376,412**	**0.2%**
Fire and Rescue (UK)	£49,583	£347,132			**£396,715**	**0.2%**
Health (England)	£3,575,461	£3,518,408			**£7,093,869**	**3.5%**
Local Government (England)	£3,524,622	£529,760			**£4,054,382**	**2.0%**
Not for Profit	£530,573	£202,657	£8,270		**£741,500**	**0.4%**
Police (UK)	£217,253	£1,278,625			**£1,495,878**	**0.7%**
Private Sector	£40,750	£434,981			**£475,731**	**0.2%**
Total	**£126,265,910**	**£76,377,353**	**£813,641**	**£1,384,817**	**£204,841,720**	
	61.6%	**37.3%**	**0.4%**	**0.7%**		

Source: Crown Commercial Service

Note : Values within source data rounded up/down. The majority of expenditure through DOS has been by Central Government Departments.

This is not unexpected as prior to the formation of the UK Government Digital Service (GDS), many Central Government Departments operated traditional outsourcing delivery models. With the changes in technology and the move to the digital cloud, these delivery models have started to change to multisourcing delivery models. The change of delivery model and the demand for new digital services has resulted in Central Government Departments and other organisations that have operated an outsourcing model needing a new way to procure skills and capabilities. The Welsh Government historically has also operated a traditional outsourced model but is moving to a multisourced delivery model too.

The wider Welsh Public Sector, in contrast, has not relied on traditional outsourcing contracts. NHS Wales Informatics Service (NWIS) and Local Authorities have traditionally had in-house teams with a preference of taking more control over their programme and project delivery.

These organisations have also had access to existing contracts which they have used to bring in skills to supplement their in-house capabilities. This goes some way to explain the percentage split.

With reference to your concern that many Welsh public services are continuing to follow the traditional large, long-lead-in-time procurement contracts, Welsh Public Sector bodies need to ensure that their procurements comply with EU Regulations and the Wales Procurement Policy Statement. However, they have autonomy and freedom to carry out their own procurements on the basis that they can evidence value for money for the tax payer. Welsh Government does not have the mandate to prescribe a particular procurement approach or to intervene in local procurement decisions. If the Committee has particular concerns about individual procurements, we would be happy to consider those specifically.

Question 2 - We would welcome further details on how the Welsh Government is using the digital outcomes and specialists framework, and, in particular, the breakdown of the G-Cloud spending. We would like information on how these apply to the Welsh public sector more generally, rather than just the Welsh Government.

The DOS framework has four elements:

1. Digital outcomes. (Suppliers who can provide teams of specialists to work on outcome based work.)
2. Digital specialists. (Suppliers who can provide individual specialists to work on a service, programme or project.)
3. User research studios
4. User research participants

The following table contains expenditure through DOS for Welsh Public Sector organisations from February 2016 (DOS commencement date) up to 31 December 2017:

	Digital Outcomes	**Digital Specialists**	**User Research Participants**	**User Research Studios**	**Total**
Welsh Assembly Government	£1,479,160				**£1,479,160**
Careers Wales		£87,720			**£87,720**
Natural Resources Wales	£41,467				**£41,467**
Qualifications Wales		£33,750			**£33,750**
Total	**£1,520,627**	**£121,470**			**£1,642,097**

Source: Crown Commercial Service
Note : Values within source data rounded up/down.

The Welsh Government has used the 'Digital outcomes' element of the framework to deliver key components of the Welsh Revenue Authority's digital services. Use has also been made of 'User research studios' for the Learning Wales website, but this has not yet fed through into the Crown Commercial Service (CCS) data. 'Digital specialists' has not yet been used because we have sourced from existing contracts which are still in place.

G-Cloud is a framework that provides buyers with access to cloud technology and services. A table breaking down the Welsh Public Sector G-Cloud expenditure by organisation is in Annex A to this letter.

Question 3 - The Digital Outcomes and Specialists framework enables the Welsh public Service to work more dynamically, through actions like seconding in experts. We ask for greater clarity on how this could be utilised across the public sector in Wales.

Developing buying capability and changing buying behaviour is an important part of increasing the usage of DOS and other appropriate frameworks by the Welsh Public Sector. I wrote to you on 23 April 2018 about the ongoing review of the National Procurement Service (NPS) and Value Wales. Whilst Welsh Government does not have the mandate to prescribe a particular procurement approach or to intervene in local procurement decisions, addressing the issues of overall procurement capacity and capability across the public sector in Wales is a fundamental part of the review, and of what will follow.

DOS is a valuable procurement route, but it does not cater for all scenarios and we have identified that we also need to help buyers and suppliers to bridge gaps. In my letter of 4 April 2018, I mentioned the market engagement exercise that we had undertaken. We are acting on this feedback to provide an easy and quick route to market for Welsh SMEs to meet small project resourcing needs for the Welsh Public Sector. NPS are currently running a procurement exercise which is now open for tenders.

Finally, you mention in your letter that you may ask me to provide oral evidence on the challenges of digitalisation at the Committee meeting on 4 June, which I am attending to discuss the Intra Wales Air Service. I am of course happy to provide evidence on those aspects of digital transformation that fall within my Group and for which I am the Additional Accounting Officer. However, the Committee will appreciate that I do not have broader responsibility for digital transformation across Welsh Government. As such, I ought not to seek to provide evidence in areas where I do not have Additional Accounting Officer responsibilities.

I hope that this information is helpful.

Yours sincerely

Andrew Slade
Director General
Economy, Skills and Natural Resources Group

ANNEX A – Breakdown of Welsh Public Sector G-Cloud Spend

Note. The expenditure for FY17/18 contains data from April 2017 to January 2018.

	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Welsh Government	£111,699	£51,883	£187,856	£530,987	£602,182	**£1,484,607**
Gwent Police		£31,229	£119,281	£903,313	£417,149	**£1,468,972**

South Wales Police		£163,565	£223,599	£208,717	£181,688	**£777,569**
Wrexham County Borough Council			£16,615	£582,200	£12,296	**£611,111**
ESTYN	£76,392	£79,771	£82,866	£80,964	£67,968	**£387,962**
Cyngor Gwynedd Council		£82,053	£224,887	£26,650		**£333,591**
Cardiff University	£88,433	£38,600	£150,213	£5,000	£34,160	**£316,406**
Cardiff Council	£31,247			£193,152	£24,603	**£249,002**
Denbighshire County Council	£39,000	£18,000		£177,665		**£234,665**
Vale of Glamorgan Council			£38,184	£111,523	£80,422	**£230,129**
City and County of Swansea	£56,380			£115,800	£46,930	**£219,110**
Dyfed Powys Police		£20,441	£44,052	£125,308	£25,928	**£215,729**
Caerphilly County Borough Council	£9,614	£9,133	£44,594	£98,556	£18,910	**£180,807**
Ceredigion County Council				£35,580	£125,600	**£161,180**
Conwy County Borough Council				£129,707	£15,527	**£145,234**
Betsi Cadwaladr University Health Board				£91,600	£53,089	**£144,689**
Newport City Council			£48,700		£84,178	**£132,878**
Welsh Ambulance Services NHS Trust			£34,083	£29,657	£58,021	**£121,760**
North Wales Police				£26,775	£88,867	**£115,642**
Equality and Human Rights Commission		£1,700	£36,353	£35,151	£37,660	**£110,863**
Grwp Gwalia Cyf	£76,738	£19,500				**£96,238**
Carmarthenshire County Council				£92,954		**£92,954**
North Wales Fire and Rescue Service				£44,303	£43,973	**£88,277**
Abertawe Bro Morgannwg University Health Board		£52,600		£5,935	£14,576	**£73,111**
Powys County Council				£17,790	£53,642	**£71,432**
Monmouthshire		£4,290		£14,250	£51,125	**£69,665**
County Council						
Aneurin Bevan University Health Board		£38,672		£16,900	£12,869	**£68,441**
Careers Wales		£15,900		£16,400	£33,829	**£66,129**

Aberystwyth University				£57,203		**£57,203**
Blaenau Gwent County Borough Council		£25,285	£13,585	£8,200		**£47,070**
Mid and West Wales Fire and Rescue Service	£3,000			£40,163		**£43,163**
Public Health Wales				£11,250	£11,250	**£22,500**
Bridgend County Borough Council				£10,500	£10,500	**£21,000**
United Welsh Housing Association Limited				£20,961		**£20,961**
Powys Teaching Health Board					£18,701	**£18,701**
Pembrokeshire County Council				£17,790		**£17,790**
Torfaen County Borough Council				£17,790		**£17,790**
Wales Audit Office				£17,782		**£17,782**
Bangor University				£2,016	£12,348	**£14,364**
Velindre NHS Trust				£14,000		**£14,000**
Arts Council Of Wales		£6,440		£707	£2,184	**£9,331**
Cardiff and Vale University Local Health Board					£7,387	**£7,387**
Merthyr Tydfil County Borough Council					£4,734	**£4,734**
Monmouthshire Housing Association		£3,840				**£3,840**
Rhondda Cynon Taf County Borough Council			£2,500			**£2,500**
Clwyd Alyn Housing Association Limited		£2,014				**£2,014**
Wales and West Housing Association Limited			£68			**£68**
Total	**£492,503**	**£664,917**	**£1,265,434**	**£3,935,197**	**£2,252,297**	**£8,610,348**

Source: Crown Commercial Service Note : Values within source data rounded up/down.

Agenda Item 4

Document is Restricted

Ken Skates AC/AM
Ysgrifennydd y Cabinet dros yr Economi a Thrafnidiaeth
Cabinet Secretary for Economy and Transport

Llywodraeth Cymru
Welsh Government

Ein cyf/Our ref MA – P/KS/0111/18

Nick Ramsay AM
Chair
Public Accounts Committee

30th January 2018

Dear Nick,

Further to the last update received by the Committee about the review of the PSO air service on 23 September 2016, I am pleased to confirm the review has been published on the Welsh Government website.

Please see link: https://beta.gov.wales/review-options-air-service-between-north-and-south-wales

Yours ever,

Ken

Ken Skates AC/AM
Ysgrifennydd y Cabinet dros yr Economi a Thrafnidiaeth
Cabinet Secretary for Economy and Transport

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NP S-PS-0027-15 Professional Services Framework – Construction Consultancy (Infrastructure and Estates) – Aviation

Review of the PSO – Long Term Future

Summary Report

Supported by Northpoint Aviation Services

Aviation, Travel and Tourism Consultants

Llywodraeth Cymru
Welsh Government

Title: **Review of the PSO – Long Term Future**

Date: 11 October 2017

Our Ref: NK018661\GDD

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QUALITY MANAGEMENT

Prepared by:	RPS

Authorised by:	RPS
Date:	16 November 2017
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Revision History

Rev.	Date	Description	Author	Checked
	17/2/2017	First Working Draft	CC	BoF
	4/3/2017	Working Draft checked and formatted	FoF	BoF
	20/7/2017	Working Draft Reviewed in light of client feedback	FoF	BoF
	29/09/17	Format adjustments	APa	GDD
	03/10/17	Corrections and updates	APa	GDD

CONTENTS

EXECUTIVE SUMMARY

Introduction

Public Service Obligation air services are a permitted class of aviation state aid that addresses defined socio economic need. In the EU they are governed by Regulation (EC) No 1008/2008 and Council Regulation (EEC) 3577/92.

The PSO (Public Service Obligation) between Cardiff Airport and a specially created civil enclave at RAF Valley, referred to in civil aviation terminology as Anglesey Airport, was first operated in 2007 and in the subsequent ten years has become established as a way of conveniently travelling between North West and South Wales for a same day return business trip. The level of use of the service has fluctuated from between 8,500 to 14,700 a year dependent on the level of fares, the reliability of the service and media speculation about the extent of political commitment to its long-term future. However, usage figures over recent months have shown welcome evidence of growth again following the emergency procurement of Van Air in early 2016 after the former operator Links Air lost its AOC (Air Operators Certificate) after a lengthy dispute with the Civil Aviation Authority (CAA).

The function of the PSO route, and the justification for the Welsh Government's support for it, is the need to overcome the geographical barrier created by the long surface journey times by rail or road between the Capital region of Cardiff and the North West of Wales. The air service reduces these journey times by over half, and crucially allows businesses in North Wales access to businesses in Cardiff and the wider South Wales region in a return day trip, and vice versa. This would be impractical (i.e. require an overnight stay) or certainly require a very long day if the air service did not exist.

Other such publicly supported air links are a feature of the Highlands and Islands in Scotland and can be found across many other EU countries, especially in Scandinavia, France, Italy, Spain, Portugal and Croatia. Whilst in many of those cases there is a strong social dimension to the service, in the case of the Welsh PSO, the great majority of trips (varying between 68% and 78% between 2014 and 2015) are for business purposes - these are split evenly between trip by the employees of private businesses and public authorities of different sorts (e.g. Welsh and Local Governments, local authorities and the education sector).

The temporary contract under which the service is currently being run extends to May 2017, but consideration is being given to extending that timeframe to allow time for Welsh Ministers to decide on the long-term future of the PSO based on the recommendations set out in this report:

- the recommendations of this review to be digested and a clear way forward agreed by Welsh Ministers; and then
- for their decisions to be implemented and if so determined for the PSO service to be re-tendered later this year for commencement in 2018.

The issues discussed in this report have been considered in line with the Welsh Language Standards and we can confirm that the continuation of the Cardiff-Anglesey PSO will not affect persons using the Welsh language, and will not result in the Welsh language being treated less favourably than the English Language.

The Origins and Scope of this Review

In early 2016 the Welsh Government (WG) commissioned two studies to examine how air connectivity within Wales, and from Wales to other parts of the UK and near Europe, could be improved:

a) The first looked at possible 'enhancements to the PSO (Public Service Obligation) air service between Cardiff Airport (CWL) and Anglesey Airport (VLY)', with a focus on Anglesey and North West Wales (including how the PSO aircraft might be used more intensively and therefore efficiently).

b) The second took the form of a review of 'thin route PSO' opportunities from CWL.

In the second half of 2016, the Welsh Government commissioned RPS (who worked with Northpoint Aviation - the authors of the earlier reports), to undertake a much wider-ranging review to determine the long-term future of the Intra Wales Air Service PSO. This review included:

i. Options for reducing the costs/subsidy per head of the extant CWL to VLY service, including consideration into reducing frequency/ceasing service provision, and the economic value the PSO currently adds.

ii. Comparing that service routing against a possible alternative from Hawarden to Cardiff.

iii. Looking at the prospects for internal services from Haverfordwest and the other smaller airports in Wales and different combinations thereof.

iv. Examining the impact that recent certification of Single Engine Turbine aircraft (SETs) for commercial public transport services by the *European Aviation Safety Agency* (EASA) might make on the viability of the different routes under consideration.

v. Exploring the potential to increase the service offering, by increasing the aircraft size to circa 31 seats and linking the PSO to attractive domestic and European destinations, and as a result, also exploring the potential National Aviation Security Programme (NASP) requirements, where aircraft of greater than 19 seats are required on certain routes (e.g. out of Anglesey and Hawarden).

Together, this body of work is referred to as the Intra Wales Air Service PSO 2016 Review and comprises a series of component 'technical' study reports, which act as a series of addenda underpinning this top-level summary report.

The purpose of this Summary Report is therefore to; provide a synopsis of the key insights, analysis and conclusions from the technical reports; synthesise their findings; draw conclusions; and present recommendations for consideration by Welsh Ministers.

The content of its principal sections can therefore be précised as follows:

Section 1: Sets out the scope of the report and the background to the current PSO operation.

Section 2: Describes the sources, data and methodology adopted.

Section 3: Provides an overview of the PSO Enhancement Study, including the catchment for the PSO route, forecasts for the route itself including those associated with various potential route enhancements and others for additional services the PSO aircraft might be able to operate between its PSO commitments. These different enhancement/route options were then subjected to a commercial appraisal, an economic assessment and a Stage 1 WelTAG appraisal in order to highlight those that looked the most promising. The conclusions and recommendations of that study are recorded in paragraphs 3.26-3.31 of this summary report.

Section 4: Whereas the PSO work explored routes that it might be possible to serve with aircraft in the 19-34 seat category as an adjunct to the core PSO service, this Thin Route study focused on routes to and from Cardiff (CWL) of 50,000 passengers [1] a year or less, and therefore less likely to be commercially viable on a free-standing basis than those with a potential market larger than that. Using an equivalent appraisal process to the PSO enhancement options in Section 3, the options examined were not confined to those that could be operated by the PSO aircraft. Other aircraft and thicker routes over 50,000 passengers per annum that could survive on a basis other than through the support of a PSO (e.g. via commercial route development incentives and Route Development Funds) were also considered.

Section 5: Examined NASP (National Aviation Security Programme) Compliance at Anglesey and Hawarden airports in case it was determined that some or all of the services to be operated from one or both of these airports would require aircraft with more than 19 seats. This included identifying potential capital costs associated with any compliance measures.

Section 6: Considered the implications of using Single Engine Turboprop aircraft (SETs), on the PSO route and on other possible routes elsewhere in Wales. Comparative operating costs against a 19-seat aircraft benchmark and the pros and cons of two illustrative aircraft types are evaluated and some indicative conclusions drawn.

Section 7: Begins by examining the economic consequences of closing the PSO route before broadening out into a review of intra and extra Wales route options that could make up first a core network of services focused around the main PSO service and then a wider network encompassing airports such as Hawarden and Haverfordwest. These options are again appraised as previously.

Section 8: Required an analysis of the significant preceding route based evidence; the study constructed 12 strategic policy scenarios, that reflected the full range of options that had been considered, from reducing or shutting down the existing service, through various incremental enhancements, to using the existing PSO aircraft more effectively and developing either a core or more expansive network of intra-Wales routes and routes to London or other significant hub airports (e.g. Amsterdam, Paris or Frankfurt) by introducing additional PSOs. The scenarios are then subjected to WelTAG appraisal [2] and evaluation against a series of strategic policy objectives.

[1] Occasionally the report uses the pax acronym for passengers in the narrative or tables

[2] Transport initiatives in Wales can be appraised using WelTAG guidance at the planning stage, to ensure that they consider the economy, environment and society.

Section 9: Considers the case for the Welsh Government to purchase or lease the aircraft needed to service the PSO route(s), or enter into a joint venture with the private sector to do so. It also examines whether there may be a case for Cardiff International Airport Ltd to take over the running of Anglesey Airport from Ynys Mon Council and its current service provider Bilfinger Europa (presuming TUPE protection for frontline staff).

The summary analysis and the associated findings are then drawn together in a final chapter, setting out Findings, Conclusions and Recommendations under various policy related timelines – immediate, short-term, medium-term and long-term. Those findings, conclusions and recommendations are reiterated in full below.

Findings, Conclusions and Recommendations

Bringing Clarity to the Future of the PSO Service

There is a strong economic case for the retention of the PSO service between Cardiff and Anglesey airports based on the fact that journey time savings to business passengers generates Gross Value Added (GVA) [3] that broadly matches the amount of subsidy being invested. In addition, it also supports existing jobs and has the ability to create new ones, particularly in Anglesey, and provides connectivity with South Wales which neither rail nor road can match for the level of financial support offered. Strategically, it provides an important functional and symbolic link that connects North and South Wales, which facilitates easier access to internal markets for Welsh companies.

Extending the Current Contract

The PSO shows clear signs of having the potential to grow further than witnessed to date, but in the short term, it needs a period of consistent unbroken operation, scheduling and pricing optimisation and most importantly, better marketing for that growth to be realised. In addition to these essential steps, avoiding further political speculation about the route's future is important if passenger confidence in, and usage of, the route is to grow.

The findings of this study programme suggest that there are a number of short term steps such as reversing the basing of the aircraft, extending weekday operating hours, adding rotations, keeping fares competitive and increasing awareness of the service that could help to enhance the service's performance and improve the value for money that it already offers to Wales. These could all be tested, with the agreement of the operator, if the existing temporary contract were extended sufficiently to allow plenty of time for re-tendering the PSO.

Our economic impact assessment predicts that if a 19-seat aircraft operation were retained, but with extended operating hours and attractively priced fares, then by 2022, the number of passengers using the route could increase from what we considered to be a reasonable approximation of the normalised

[3] Gross value added is the measure of the value of goods and services produced in an area, industry or sector of an economy, in economics. In national accounts GVA is output minus intermediate consumption; it is a balancing item of the national accounts' production account.

baseline in 2015 - circa 11,000 passengers per annum (ppa) - to just over 14,200 or 73% seat occupancy. Adding substantially improved marketing (including promotion through GDS [4] systems) and a third rotation would achieve 19,150 (at a seat occupancy of 66%), creating an estimated 20 jobs and additional GVA of approximately £290k per annum.

If we were to apply a similar suite of enhancements, but increase aircraft size to 31 seats and remain with only 2 rotations a day on the route, the return is estimated to be almost 18,000 passengers per annum (a seat occupancy rate of less than 60%), with up to 18 jobs created and GVA in the region of £250k per annum.

This suggests that there is a strong case for extending the existing temporary contract to 30 September 2018 - long enough for commercial and operational innovations to be trialled sufficiently to inform the requirements of the subsequent 4-year contract. The extension to September 2018 will also provide reasonable time to undertake the tender process – allowing requirements to be fully scoped, and a future operator to be competitively procured and appointed 6-8 months ahead of the commencement of services. This vital lead time will enable the operator to successfully mobilise and undertake preparatory work before taking over the operational delivery.

Any extension to the temporary contract will require detailed negotiations with the current provider, who may seek additional compensation for taking on additional operational or commercial risks associated with some of the innovations proposed (e.g. basing the aircraft at Anglesey during the summer may need weekend positioning for maintenance to alternatives such as the Isle of Man or possibly Caernarfon). But it also provides a unique opportunity for 'real world' trial of these ideas, and generates invaluable empirical evidence for the medium to long term. With this in mind, we support the extension of the current contract.

Immediate Recommendations:

I	Retain the North-South PSO between Cardiff and Anglesey.
II	Extend the temporary contract with Van Air to 30th September 2018 as soon as possible.

[4] A **global distribution system** (**GDS**) is a network operated by a company that enables automated transactions between travel service providers (mainly airlines, hotels and car rental companies) and travel agencies. Travel agencies traditionally relied on GDS for services, products & rates in order to provision travel-related services to the end consumers. A GDS can link services, rates and bookings consolidating products and services across all three travel sectors: i.e., airline reservations, hotel reservations, car rentals.

III In so doing, introduce a series of potential service enhancements and some targeted external support. These should include some or all of the following:

- Increase the frequency with which the PSO aircraft is used to 3 rotations per day, either by adding a midday service on the Cardiff-Anglesey route or by identifying with the operator, a commercial non-PSO destination for the aircraft to serve.
- Discuss a trial with the operator to test the demand for a reversed timetable by rescheduling the PSO and basing it at VLY for summer 2017.
- Extend the operating hours at VLY as soon as this can be agreed with the RAF, but only if the new schedule requires it.
- Negotiate any variation required to the current subsidy agreement arising from these changes, subject to an orderly handover being achieved to any new PSO dispensation, especially if it involves a new operator.
- Increase the provision of marketing support on a match funded basis – we consider this could mean a capped public contribution of up to £25,000 in the period to September 2017 and a further £50,000 between September 2017 and the end of the extended contract period.
- A 'micro-networking' marketing plan needs to be agreed between the airline, the airports and other key stakeholders (North Wales' tourism interests, Isle of Anglesey County Council (IACC) and Gwynedd County Council). The Welsh Government should lead preparation of the plan via a PSO stakeholder marketing group, but once it is complete, delegate responsibility for implementation to a suitable member of the collaboration.
- Resource commitments in cash or kind to be secured from the marketing collaboration members, and identify a way to manage, coordinate and monitor on-going efforts. These commitments can be advertised in the Invitation to Tender document for PSO bidders where they may be presented as match funded undertakings by the operator.

Maximising Use of the PSO Aircraft

Realistically, even if the aircraft contracted for the Cardiff - Anglesey PSO were to be based at RAF Valley, it would be difficult to achieve four rotations a day without extending the length of the RAF Valley's current operating hours. Initial approaches to the RAF indicated they might be willing to explore some modest variations on weekdays, providing they were appropriately compensated, but would not be willing to introduce weekend operations due to a high proportion of RAF personnel leaving the base at weekends to return home to family or visit friends.

Experience suggests coming to an agreement with the RAF will take some time, and is thus better assigned as a 'short term' rather than 'immediate' recommendation.

The study did, however, identify a number of exciting potential route opportunities for the next 4 year PSO contract (October 2018 – September 2022) that can be used to explore, especially if the size of the aircraft is increased from 19 to +30 seats. Conceptually, if the implementation of the 'immediate'

recommendations has the positive impact on passenger numbers we expect, then the use of a larger aircraft twice a day on the PSO route may ultimately be justified by the end of the next PSO contract period (i.e. 2022) as load factors on a twice a day service would have reached 65%.

However, the big attraction of securing the use of a larger aircraft on the PSO is that it would open up the potential to serve other destinations like a London airport from Anglesey (initially Luton, and eventually when the third runway is open, Heathrow) and similarly other hub destinations like Amsterdam (for which there is evidence of significant demand for a one a day service from North West Wales) or Paris, using the aircraft to add a second rotation from Cardiff. Thirty seat aircraft have the attraction of being pressurised and in some cases substantially quicker than 19 seat equivalents and are therefore more attractive to passengers, are more likely to be accepted as meriting a slot at congested airports and have better route economics at equivalent load factors therefore offering scope for cheaper fares.

Although the prospects for some of these routes (particularly the overseas hubs[5]), may be made more speculative should bids for the next PSO remain based on a 19- seat aircraft, a London flight would remain a possibility, with Northolt a destination that should be explored with the MoD, and there are other domestic options like Belfast or the Isle of Man which may generate interest.

The 2018-22 PSO Tender process

The extension of the current temporary arrangements provides an important opportunity to better adapt the next four year PSO to secure preferred outcomes. These will include:

- seeking a strong operator,
- with a larger aircraft,
- offering credible additional use of the aircraft on non PSO task(s),
- based on a persuasive route development plan that includes increasing patronage and yield, and hence reducing requisite subsidy,
- access to extended marketing capability (which may include GDS visibility, interlining, franchising),
- a persuasive and well thought out marketing plan for extending the commercial reach of the PSO service (geographically and in terms of market segments (e.g. attracting inbound leisure passengers to North West Wales), developing new routes, and working

[5] Airline hubs or hub airports are used by airlines to concentrate passenger traffic and flight operations at a given airport. They serve as transfer or stop-over points to get passengers to their final destination. They are part of the so called hub-and-spoke system.

with both Cardiff and Anglesey airports and local stakeholders to optimise the value for money of on-going marketing support.

It also provides a longer lead time before launch to permit optimal preparations and marketing. This includes putting in place new arrangements with the RAF (see below) and marketing the route(s) for several months in advance using micro networking techniques to maximise value for money.

The recommendation around enhanced and sustained marketing provision is based upon the early experience of Highland Airways on the route, where they enjoyed patronage at least 2,000 p.a. more than their successor operators. Highland Airways also enjoyed significant stakeholder support from a range of agencies including IACC, CWL, the Welsh Language Board and deft community micro marketing that was summarised in an appendix to the PSO Enhancement Study. Such techniques (e.g. social media campaigns, competitions with local radio stations, PR stories, cross marketing with attractions and key accommodation suppliers), rather than simply relying on expensive newspaper or poster advertising, are in common use at smaller airports and are recognised as being effective.

Scottish evidence also suggests an uplift in patronage on a PSO, when a higher profile franchise operator took over the route from a standalone airline. There was also evidence from the route when a 'bolder' yield management strategy, where deeper ticket discounts were offered, had a positive impact on carryings both during Highland Airways' and Links Air's tenures.

Implications of Basing the Aircraft at Anglesey

If, as a result of the 2018-22 PSO tender process, it looks like the operator will be willing to base their aircraft at Anglesey, then a dedicated hangar would likely be a requirement for permanent overnighting. A Rubb-style hangar can be erected within 3-4 months and at modest cost (c£750,000 for a 19 to 31-seat aircraft plus any required groundworks) and has the advantage of being demountable and therefore the capability of being moved elsewhere if needed.

Introducing a 31-seat aircraft would also require the airport at Anglesey to become NASP (National Aviation Security Programme) compliant. This would require level three screening equipment to be introduced and a range of other measures airside to prevent intrusions into the restricted area. Costs are again estimated at c£750,000.

Engagement with the RAF

The RAF is a key partner in the PSO operation providing the airside infrastructure and operations support without which the civil enclave could not operate. Variations to, or expansion of, the current PSO service will require their continued collaboration and in some cases material changes to their existing operating hours.

Of the recommendations above, the marketing scheme and probably a single additional midday rotation can be implemented without varying the existing agreement with the RAF/DIO [6]. Initial indications are that they may be willing to show some flexibility, but new arrangements will take time to negotiate and

[6] Defence Infrastructure Organisation

the aim must be to secure temporary dispensations with a new agreement coming into place at the commencement of the new PSO.

The new arrangements are likely to result in additional costs both in terms of additional charges from the RAF for the use of their airfield and capital costs to enhance the capability and capacity of facilities within the existing or expanded civil enclave. The RAF will be justified in passing on these costs in full if they are solely for the purpose of PSO related air transport movements and outside their current core operating hours; moreover, if not cost reflective, this could give rise to issues relating to illegal state aid. The scale of these costs need to be firmed up as quickly as possible and if accepted, turned into appropriate budgetary provision moving forward.

The position concerning state aid also needs to be confirmed. Although it is possible that a formal notification may not be needed to cover any additional revenue support costs or capital expenditure on enhanced facilities on de-minimis threshold or Services of General Economic Interest (SGEI) grounds for future accounting officer and audit purposes, it would be prudent to secure DfT and EU confirmation of this. SGEI are economic activities that public authorities identify as being of particular importance to citizens and that would not be supplied (or would be supplied under different conditions) if there were no public intervention. Examples are transport networks, postal services and social services.

Airport Governance

For a variety of reasons, preparation for the new PSO may provide the opportunity to review the ownership and operation of the civil enclave at Anglesey. These are set out in more detail in Section 9 of the report, but are associated with operating efficiencies, the availability of marketing resources, expertise in security and a seamless approach to Welsh Government policy and implementation.

For this reason, we believe serious consideration should be given to asking Cardiff International Airport Ltd to take over the running of the Anglesey Airport operation on the Welsh Government's behalf, at a date to be agreed with Isle of Anglesey County Council (IACC) and their contractor Bilfinger. TUPE rules would mean existing staff would move with any transfer of the operating contract. The Transfer of Undertakings (Protection of Employment) Regulations 2006 known colloquially as TUPE, are the United Kingdom's implementation of the European Union Business Transfers Directive. It is an important part of UK labour law, protecting employees whose business is being transferred to another business.

We are aware that IACC is currently the legal owners of Anglesey Airport facilities built with the benefit of a long lease from the RAF. However, the costs of the operational management are fully underwritten by the Welsh Government and IACC are under-resourced to take on the expanded client role for a major expansion of the civil enclave envisaged in our other recommendations.

Therefore, it would almost certainly be simpler all round if ownership was transferred to the Welsh Government and they took responsibility for finding an operator.

Services from Hawarden

The possibility of developing service offerings out of Hawarden are, in our view, limited until 2022 and beyond, however, there would be merit in discussing the possibility further with APG and Airbus during

the extended contract period so that a clear understanding can be presented to tenderers about the facilities and charges that would be offered to a possible PSO operator if access were to be permitted at all.

Our indicative view, prior to these formal discussions, is that securing access to Hawarden is likely to be too expensive, would require significant capital investment, may attract state aid complaints from the nearby Liverpool and Manchester Airports and makes the continued serving of the North-West Wales region by air, which all the evidence from the supporting technical studies indicates is strategically important, more complicated and therefore potentially also more expensive. Furthermore, on a very strict reading of the PSO Regulations we have doubts about whether the services between Hawarden and Anglesey/Cardiff Airports would qualify as a PSO.

In the longer term (i.e. for the PSO period 2022-26) it may be possible to develop a package of key stakeholder support (especially amongst companies based in the relevant enterprise zones at either end of the route), to secure 9-seat direct service linking Hawarden with Cardiff, but that can be for a future review.

More significantly, in a drop-in or triangulated format (e.g. VLY-CEG (Hawarden)-LHR-CEG-VLY) is the most likely way North Wales will secure direct access to Heathrow when its new runway opens, due to the likely limitations that will be imposed on the number of slots that will be released for domestic services. Such a service would generate very substantial positive benefits in terms of connectivity for the wider economy of North Wales and, in our view, should be aggressively pursued by Welsh Government over the next 2 years for commitments from the UK Government and Heathrow during its DCO (Development Consent Order) process.

Access to Heathrow

Both demand and economic impact investigations indicated that access to LHR would score highly from South Wales as well as North Wales. A shuttle service 3-4 times a day would primarily serve the onward connecting market from South Wales, most of which currently drives and parks at Heathrow. Its impact on the point-to-point market heading for central London from South Wales, which will be well-served by improved rail journey times, is expected to be small. But with an overall market we estimate at over 200,000 passengers, securing slots for such a shuttle service from Cardiff to Heathrow would be of great significance economically and ought to be a high priority for the Welsh Government in the short term, with the objective obtaining a commitment, both political and contractual, between the Welsh Government and the UK Government (and arguably also Heathrow) before the Development Consent Order (DCO) application for the third runway is submitted in 2019.

Cardiff Thin Route Support

Our studies identified potential for route development out of CWL both with the PSO aircraft (particularly if it was 29+ seat) as well as for routes defined in the study as ‘thin’ (less than 50,000 passengers per annum). State aid measures above and beyond more normal airport route development mechanisms were examined. In addition to the Heathrow Shuttle above, other hub destinations in mainland Europe

like Frankfurt were identified as potentially high performing; especially if a double daily weekday frequency could be reached. A number of domestic routes from Cardiff also look promising and merit further investigation, either because the links currently don't exist or because they would benefit from enhanced daily frequency. These include Manchester, Belfast, Leeds, Newcastle, Aberdeen and Norwich.

Options for securing these objectives include additional PSO's, support from UK Government RACF[7] funding or a time limited route development scheme established and funded by the Welsh Government itself but in line with established UK-EU protocols.

Short Term Recommendations:

I. Include the option of supporting a 30-seat aircraft in the 2018-22 tender process and ask bidders to highlight any other destinations they might seek to serve if the PSO were to be awarded on that basis.

II. Issue the Sept. 2018 PSO Tender in Autumn 2017 with aim to award in January 2018.

- Ensure Tender Options explore both current 19 seat solution and larger aircraft solutions (ideally with additional midday PSO or credible non-PSO route development initiatives encouraged).
- Ensure Tender Selection Criteria properly weights preferred outcomes and this will include superior patronage development and marketing plans; basing of aircraft; additional use of aircraft; GDS[8], interlining, franchising or other benefits. Properly weight quality versus cost in evaluation – we suggest 70% to 30% respectively.
- Pre-canvas a sample of operators to better inform the options being tendered.

III. If, as a result of a summer trial in 2017, basing the aircraft in Anglesey and adapting the timetable accordingly looks promising, a site for a hangar will need to be agreed with RAF Valley and a value for money hangarage solution identified and implemented.

IV. If 29+ seater is successful in tender competition then invoke NASP compliance preparations in parallel with lead in time for a new PSO launch. Refine NASP preparations further as a contingency in the interim.

[7] The Regional Air Connectivity Fund is a DfT initiative to support route development in conformity with permitted State Aid Route Development Funds

[8] Global Distribution System results essentially in more visible ticketing

V. Negotiate a new agreement concerning the operation of the civil enclave, covering opening hours, additional charges associated therewith, approval to introduce NASP measures should these be needed in the future and permission to expand car parking and other supporting infrastructure (e.g. an aircraft hangar) if required.

VI. Appoint a project manager for the capital works:

- Draw-up a timetable for designing, securing approval and having budgetary authorisation to complete the works;
- Generate architectural and engineering drawings for the planned physical enhancements (inside and out);
- Specifications for any new equipment associated therewith; ▪ Secure planning and building consent for the designs.

VII. Develop appropriate budget provision– capital and running cost – to cover these items.

VIII. Assess whether state aid approval is needed and either:

- Secure DfT and the European Commission confirmation that formal state aid notification is not required; or

- Submit a notification for the full potential expansion under these recommendations and all those that follow within the next 3 calendar months in order that state aid approval is in place before the operator of the new PSO is chosen and the capital works begin.

IX. Tender and undertake any facilities enhancement work associated with the new operational schedule prior to the new PSO contract commencing.

X. Explore with IACC and CWL the practicality of CWLtaking over responsibility of running Anglesey Airport and managing the NASP upgrade.

XI. Conclude outline discussions with APG and Airbus about using Hawarden for civilian scheduled services:

- Gain clarity on the need to build a new passenger terminal or re-task the restaurant (which would be less expensive) if NASP was required.
- Explore APG's appetite for investment in any such civilian air service initiatives.
- Ensure Airbus is informed and content with how things are 'left'.
- Seek 'North Wales' slots at LHR3 for a triangulated air service.
- If Single Engine Turbine (SET) aircraft are obtained for HAW-CWL (see below) consider other permutations for the aircraft (e.g. HAW-CEG).

XII. Pursue the case for slot access from CWL and VLY to LHR strongly with DfT and the wider UK Government.

XIII.	Active support should be offered to CIAL for 'thin route' development, independent of, but complementary to, the existing PSO, using either further PSO designations or a formally authorised Route Development Fund (RDF) to bolster standard airport commercial efforts in this area, but also to act as an alternative to discounted APD (Air Passenger Duty) if this power is not ultimately devolved to the Welsh Government. ▪ Explore further national and international PSO designations. ▪ Develop a formally authorised Route Development Fund (RDF); most probably based on similar methodology to the already approved DfT Regional Air Connectivity Fund. ▪ Anticipate and counter competition and state aid complaints from Bristol Airport and establish definitively that Bristol and Cardiff do not share the same catchment area. This is crucial to all potential initiatives in this area. Commission a Catchment Study that demonstrates the case for this assertion.

Expanding the Network from North West Wales

As outlined above, the new PSO (i.e. 2018-22) is likely to be the opportunity to consolidate any trial undertaken in basing an aircraft in North West Wales. This maximises the opportunities for developing additional routes from there. The subsequent PSO (2022-26) might then be used as the chance to expand the network of routes from Anglesey by adding additional services and possibly introducing a further PSO and aircraft.

Single Engine Turbines

It is arguable that this is also the time for a decision to discount the use of 9-seat Single Engine Turbines (SETs) at higher frequencies on the main PSO route. Of the SETs considered the Pilatus PC12 is the most attractive option but costly to run; the Cessna Caravan offers lower costs but does not provide an attractive passenger environment and only achieves minimal cost savings compared to a 19-seat aircraft if there is sufficient demand to justify three rotations a day. The SETs would also introduce significant constraints on seat capacity and could affect future levels of demand as there is evidence that some passengers will avoid flying on very small aircraft (as happened during Links Air's use of a King Air on the PSO in December 2015).

The use of SETs should only be contemplated if demand drops precipitously to less than 7,500 passengers on an annual basis and it is considered desirable to maintain the PSO service. With this exception, it is our view that the use of SETs could be restricted to long-term options such as a (HAW) Haverfordwest – CWL to offer connecting flights to a Heathrow shuttle from Cardiff, and to any crosscountry options (e.g. HAW - CEG (Hawarden) or Llanbedr to Cardiff as and when these are considered necessary or expedient.

Aircraft ownership Option

In addition to keeping the progress of the PSO under close scrutiny and ensuring its cost-effective delivery, the issue of potential ownership of the aircraft being used should be explored further as option, perhaps with an eye on the 2022-2026 PSO period.

Medium – Long Term Recommendations:

I.	Review future route prospects, when the performance of services provided under the 2018-22 contract becomes clear.
II.	Do not pursue SET for current PSO. Revisit SET if CWL gains access to LHR. This aircraft could then provide a useful feeder flight from HAW to CWL, for its shuttle to LHR and also offer the potential to provide a CEG-CWL link.
III.	Explore the possibility of a Joint Venture with an operator to be developed to help share risk and allow the Welsh Government to benefit from any acquisition of Heathrow slots.

1 INTRODUCTION

1.1 Five in-depth technical studies have been undertaken as part of a thorough review of the PSO model supporting the current air service between Cardiff and Anglesey. Their aim has been to inform decisions about the route's long term future and the possible extension of the PSO mechanism to other routes within Wales and to destinations elsewhere in the UK. By exploring a wide range of possible scenarios and route options, the technical reports have provided a wealth of information and analysis, which this summary document has condensed to produce an accessible synopsis of the work including key findings, conclusions and recommendations.

1.2 Building upon two earlier studies – the first to examine possible enhancements to the PSO (Public Service Obligation) air service between Cardiff and Anglesey (including how the PSO aircraft might be used more intensively and therefore efficiently), the second to review a range of thin route[7] PSO opportunities to operate out of Cardiff Airport - the Welsh Government commissioned RPS who worked with Northpoint Aviation (the authors of the earlier reports) to extend the programme of work into a much wider, more detailed review.

1.3 The scope of this extended work included:

I. Options for reducing the costs/subsidy per head of the extant CWL to VLY service, including consideration into reducing frequency/ceasing service provision, and the economic value the PSO currently adds.

II. Comparing that service routing against a possible alternative from Hawarden to Cardiff.

III. Looking at the prospects for internal services from Haverfordwest and the other smaller airports in Wales and different combinations thereof.

IV. Examining the impact that recent certification of Single Engine Turbine aircraft (SETs) for commercial public transport services by the European Aviation Safety Agency (EASA) might make on the viability of the different routes under consideration.

1.4 Exploring the potential to increase the service offering, by increasing the aircraft size to circa 31 seats and linking the PSO to attractive domestic and European destinations, and as a result, also exploring the potential National Aviation Security Programme (NASP) requirements, where aircraft of greater than 19 seats are required on certain routes (e.g. out of Anglesey and Hawarden).

[7] Thin Route study focused on routes to and from Cardiff (CWL) of 50,000 passengers a year or less, and therefore less likely to be commercially viable on a free-standing basis than those with a potential market larger than that.

1.5 Together this body of work is referred to as the Welsh PSO 2016 Review and comprises a series of component 'technical' study reports (listed below), which act as a series of addenda underpinning this top-level summary report:

I. The Welsh PSO Anglesey Route Enhancement Study including options for complementing the PSO with middle of the day flights.

II. Thin Route Development Options from Cardiff Airport, which examined options beyond those pertaining to the additional use of the PSO aircraft.

III. Evaluation of NASP Compliance at Anglesey and Hawarden Airports.

IV. Long Term Future Options for Aviation PSOs in Wales.

V. Aircraft-related Considerations Associated with Welsh PSO Procurement.

1.6 The purpose of this Summary Report is therefore to; provide a synopsis of the key insights, analysis and conclusions from the technical reports; synthesise their findings; draw conclusions and present recommendations for consideration by Welsh Ministers.

Background to the Current PSO Operation

1.7 The Welsh Government introduced a business focussed north-south PSO air link in 2007 which aimed to improve connectivity between North and South Wales for the benefit of the Welsh Economy. The PSO route was operated first by Highland Airways from May 2007 until March 2010, at which point the airline went into receivership. The PSO was immediately retendered on an emergency interim basis and Manx2, with its partner airline FLM, recommenced the service on 10th May 2010. However critically, it is to be noted, the PSO suffered a 3 month break in service. A full retendering process took place shortly thereafter, with a four-year contract awarded to Manx2 and FLM in December 2010.

1.8 However, at the start of November 2012 FLM lost its Air Operator's Certificate (AOC) and was replaced as the route's carrier by Links Air. Although the Welsh Government agreed the novation of Manx2's rights and liabilities under the contract to a new company Citywing on 1 January 2013, in March 2013 the Welsh Government decided to assign Links Air to run the air service contract for the remaining period of the contract (i.e. from 17 June 2013 to November 2014).

1.9 In a subsequent tender competition, the Welsh Government awarded Links Air a new PSO contract for the route commencing in December 2014 and running until December 2018. However, in October 2015, Links Air had its AOC suspended by the Civil Aviation Authority (CAA). Thereafter they sub-contracted aircraft from a number of companies to fulfil the service. Links Air withdrew from the route in January 2016, and following competitive tender was replaced by Van Air on an interim basis, which was subsequently extended to May 2017.

1.10 The service currently consists of a 19 seat LET410 (See Figure 1) that is based in Cardiff undertaking two rotations each day – early morning and late afternoon - Monday to Friday (none at weekends), with an earlier finish on Fridays because of shorter RAF opening hours at RAF Valley, of which Anglesey Airport Terminal is a 'civilian enclave'.

Monthly carryings since the route started are shown in the graphic below. (please note this section was completed before VanAir withdrew)

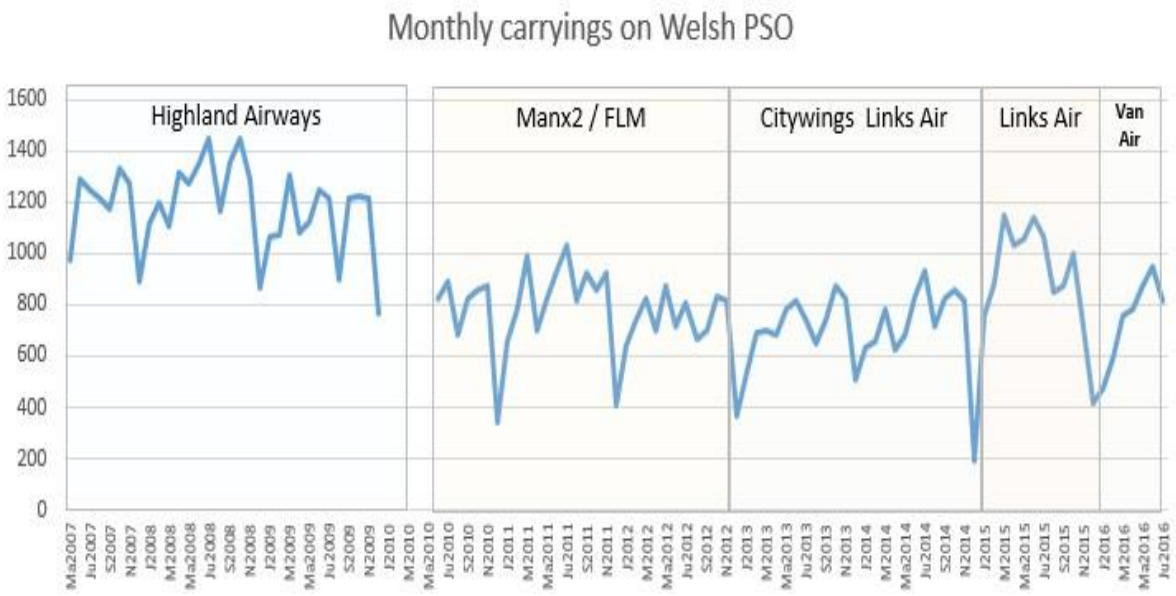


FIGURE 1: LET410 UNPRESSURISED AIRCRAFT CURRENTLY (SIC) ON PSO ROUTE - OPERATED BY VANAIR AND MARKETED BY CITYWING

1.11 The service's chequered history has ensured that the performance of the PSO route, as measured in passenger volumes, has been characterised by significant volatility. Its recent under performance is likely to reflect, at least in part, the many challenges the service has faced, not least:

- The 2008/9 recession;
- Interruption of service resulting from an airline failure in 2010;

- Changes to the operator and aircraft type used;
- Suspension of AOCs (for both FLM and Links Air);
- The 2016 unexpected withdrawal of service and emergency / temporary contracts to keep the service going;
- Some of this translated into bad news stories and speculation in press;
- Inconsistencies in pricing policies;
- Under-resourced marketing of the route.

Opportunities Looking Forward

1.12 The Review has identified some significant opportunities that could help to improve the existing route's fortunes and increase its performance, namely (in no particular order):

- Major new power and commercial developments are planned on Anglesey requiring contractors and their advisors to access the area efficiently; for instance, the Swansea Tidal Lagoon Project is an important potential energy project that could have interaction with Anglesey's Energy island;
- The potential to attract more inbound tourists, not just from the rest of the UK, but also international with a particular focus on the short break market built around the outdoor tourism assets and experiences North West Wales has to offer;
- The potential to encourage dynamic packaging through collaborations between the airline, airports and local accommodation and attractions providers;
- The potential scope for air services to operate to other destinations so that the aircraft is not standing idle when it is not needed for PSO related activity;
- That potentially different aircraft type used could be more compatible with stimulating new markets (e.g. a route to London and ad hoc charter operations), as well as the requirements of the core PSO service;
- The potential scope for changes to operating hours/days to maximise market utility and exploring with key stakeholders and businesses the value of a service that will enable key sectors and Enterprise Zone's in different parts of Wales to be linked quickly and efficiently.

2 COLLATING THE EVIDENCE

Context

2.1 It is useful to keep in mind that the suite of technical reports supporting this summary document have taken over a year to prepare, and that during that time there have been a number of important developments that have directly, or indirectly, influenced the PSO, and the scope of the work required for this review, including:

- the loss of AOC and subsequent withdrawal of services by Links Air;
- the emergency contract position currently imposed on the route;
- the selection of Heathrow for South East runway expansion;
- the Brexit vote and the Prime Minister's recent clarification of the implications thereof;
- a change of Welsh Ministers bringing the desire for a fresh look at the PSO; and
- a number of successful route developments and growing passenger numbers at Cardiff Airport.

The technical reports are shown in Table 1.

TABLE 1: STUDY TOPICS, TIMING AND SEQUENCING

Welsh Aviation Review Technical Reports Summary	Dates
Enhancement options to the PSO (Public Service Obligation) air service between Cardiff Airport (CWL) and Anglesey Airport (VLY) or the report was more formally entitled ***Demand Forecasting, Economic Analysis and Exploring Extending the Aircraft Size and Operating Hours at Anglesey Airport*** *with a supporting Appendices Section.*	January – April 2016
Thin route development opportunities from CWL with the report more formally entitled ***Thin Route Development Possibilities out of Cardiff Airport and appropriate State Aid Mechanisms to help deliver***.	April – July 2016
Exploring the potential National Aviation Security Programme (NASP) requirements, where aircraft of greater than 19 seats are required on certain routes (e.g. out of Anglesey and Hawarden). The report more formally entitled Welsh Aviation Review - ***National Aviation Security Programme Implications***	November – December 2016
Options for reducing the costs/subsidy per head of the extant CWL to VLY service, including consideration into reducing frequency/ceasing service provision, and the economic value the PSO currently adds and Comparing that service routing against a possible alternative from Hawarden to Cardiff. The report more formally entitled ***Technical Report into Long Term Future Options for Aviation PSOs in Wales*** *with a supporting Addendum Section.*	September – December 2016

Examining the impact that recent certification of Single Engine Turbine aircraft (SETs) for commercial public transport services by the *European Aviation Safety Agency* (EASA) might make on the viability of the different routes under consideration. It also included a consideration of Aircraft Considerations Associated with Welsh PSO Procurement The report was more formally entitled Welsh Aviation Review - ***Aircraft Related Considerations***	November – December 2016
The Intra Wales Air Service PSO 2016 Review - *Summary Report*	January – February 2017

2.2 The underlying technical documentation reflects these changes in real time, depending on commissioning and completion dates. Consequently, one of the aims of this summary document is to draw upon each of them as required and provide a comprehensive over-arching view of all the policy alternatives evaluated as at January 2017.

Sources and Data

2.3 The current review has been fortunate in having a wealth of historic studies into the Wales PSO service to draw upon, in addition to several route specific passenger surveys, up to date usage data from IACC, and most recently the 2015 CAA Passenger Survey. Northpoint also secured access to some old Highland Airways data and spreadsheets that help to underpin important assumptions and permitted a marketing case study to be undertaken during the initial phases of the work.

2.4 This core material was supported by a broader literature review, which is detailed in the extensive Bibliography (see Appendix A), historic CAA data, a range of stakeholder consultations and a series of site visits and stakeholder meetings in January and November 2016 (see Appendix B).

2.5 The study made use of RDC Aviation's APEX [8] software, which models the commercial economics of air services based on a wide range of changeable variables, with the key output being a four-year profit and loss projection or an estimate of the average fare (excluding taxes) needed to breakeven. RDC was asked to adapted APEX for this work, by adding new aircraft types and airports that to the database. RDC was also asked to update an intra-Wales gravity model used in the original 2003 feasibility studies, to generate point to point demand forecasts for sectors where there are no existing services. The 2003 version of the model produced a range of estimates for the Cardiff - Anglesey route, which the route later demonstrated, were essentially sound and within acceptable margins of error.

[8] APEX is an airline performance analysis platform developed by RDC Aviation

2.6 In addition, benchmarking was undertaken on similar approaches elsewhere across Europe that are comparable to the Welsh PSO, with particular reference to internal domestic PSO routes and networks, and to other thin route services (e.g. to the rest of the UK and Europe). This provided useful comparative material across a range of scenarios.

2.7 Finally, the technical studies supporting this summary report have also benefited collectively from the contributions of a number of in-house and external experts engaged by Northpoint and listed in Appendix C.

2.8 It is likely that this is the most exhaustive study of the PSO, and options for its future that has been commissioned to date.

Methodology

Route Options

2.9 We have applied the same methodology and approach used in the original PSO Enhancement (Anglesey) and Thin Route Development (Cardiff) studies to the evaluation of different route options in the largest and most recent of the technical reports, the PSO Review Study. The latter takes in new airports, aircraft types and operating concepts, but in order to optimise the level of read-across that is possible at a route level, we have sought to be consistent in the techniques used for demand forecasting, commercial evaluation and route appraisal (including the use of Stage1 WelTAG[9] analysis). There were some differences, because the demand forecasts we have generated have needed to draw on a number of different techniques depending on circumstances and data availability; but in most regards, there is a good deal of commonality across the appraisal processes.

2.10 In so doing we have been able to create recognisable key stages in each of the route focused technical report's evidence base - a market analysis, usage forecasts,

[9] WelTAG is a methodology used to appraise transport projects in Wales. A Stage 1 refers to an initial less detailed high level appraisal.

financial appraisal, economic impact assessment and then broad strategy and policy criteria via the WelTAG process drawing on a variety of metrics:

- Accessibility - distance, mode competition, travel times/costs;
- Commercial viability- load factors, subsidy needed; ▪ Economic impact – employment, user benefits and GVA; ▪ Environmental effects - CO^2 emissions.

2.11 It is worth highlighting that the reason a single environmental metric was used is because others, such as noise, air quality, ecology and surface access, were considered less prominent as the traffic volumes/movements involved are too small to result in any material effects, especially as at an airport level the services envisaged will predominantly use existing infrastructure. **Policy Scenarios**

2.12 The brief in the Longer Term PSO Review, required completion of:

- The Aircraft Considerations (or SET - Single Engine Turbine) Report;
- Site visits to all the airports in Wales potentially capable of handling scheduled passenger transport air services; and
- The NASP Evaluation of Anglesey and Hawarden; and the need to take into account the range of other relevant issues such as:
- airfield infrastructure requirements, associated operational and capital costs, and ownership and governance structures;
- the application of how PSO regulations might be applied; and ▪ the need to look at multi-route (or network) options.

2.13 We sought to sketch out a range of broader strategic scenarios that took account, and in some cases combined, the most promising looking route pairings, stopovers and triangulations, as the basis for drawing together and navigating through the wide range of policy options that all the preceding work had thrownup.

2.14 To do this we developed twelve 'scenarios' for evaluation using WelTAG and then weighted the appraisals based on five strategic objectives, in order to help tease out those that looked particularly ineffective and conversely also the most promising. This work is set out transparently in the main addendum report, and is a central plank of this summary report, because alongside the financial implications of each scenario it underpins and has helped to shape the recommendations that then follow.

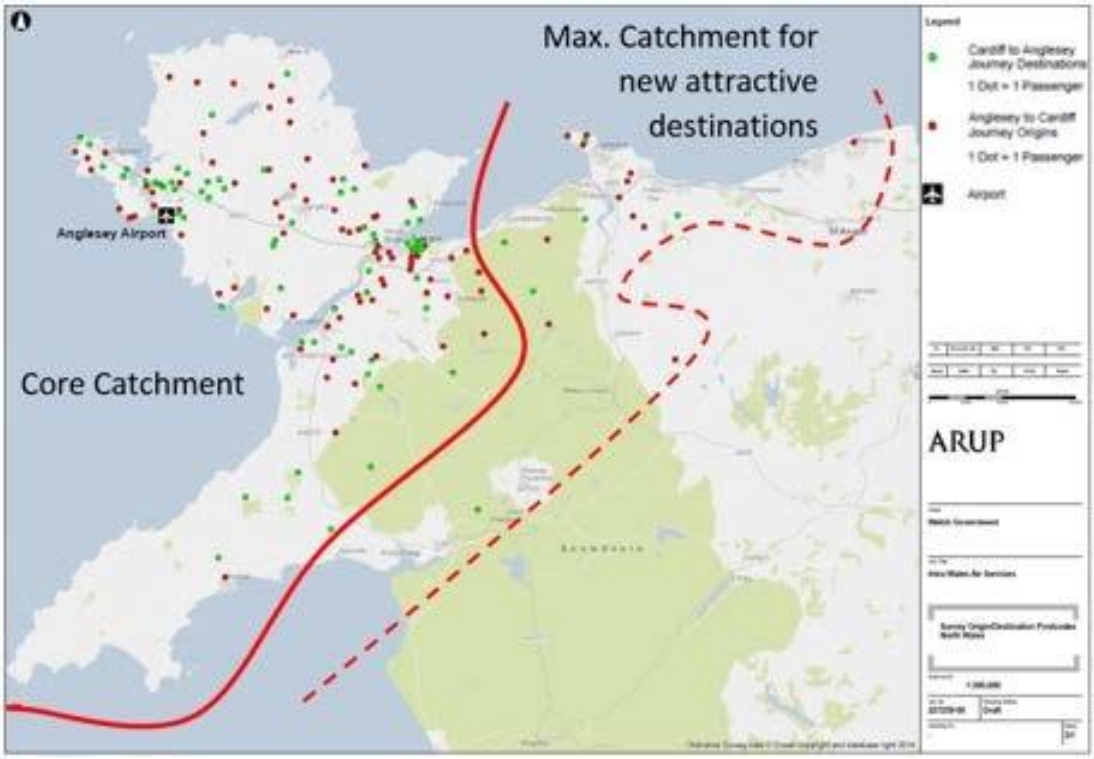
3 THE ANGLESEY (OR WELSH PSO) ROUTE ENHANCEMENT STUDY

Catchment and Assumptions

3.1 This study focused on how the aircraft allocated to provide the PSO service between Cardiff and Anglesey could be used to offer other 'commercial' (i.e. unsubsidised) operations alongside its PSO commitments, whilst also growing the patronage of the existing PSO service. The alternative idea of basing the aircraft in Anglesey and exploring a range of derivative route development opportunities was explored in some detail, as were possible alternative route enhancements out of the current Cardiff base.

3.2 The current PSO operation carried 9,000 passengers (pax) in 2015. This was considered shy of the route's real potential if operated consistently, without threats of closure, with proper marketing and competitive fares. For this reason, a figure of 11,000 pax was used as the baseline assumption in subsequent forecast iterations. The growth in numbers over the then previous three months of 2016 suggests this was probably an appropriate assumption.

FIGURE 2: CATCHMENTS SUPERIMPOSED ON ARUP (2015) SAMPLING MAP



3.3 The catchment area for the service in North West Wales is based upon Arup's 2015 study (see Figure 2). We have presumed to overlay a solid red line to indicate the core

catchment and the dotted red line to indicate a larger catchment presumed for new attractive destinations, particularly capital cities in the UK or routes to international hubs, to reflect anticipated improvements marketing and the inclusion of important inbound tourism hotspots (e.g. Mt Snowdon, Conwy Castle, Llandudno and the Blaenau Ffestiniog railway).

3.4 This then allowed us to use CAA survey data, based upon the boundaries of Gwynedd and Anglesey, as the basis for calculating existing trips with an origin or destination within the catchment, which is represented graphically by the dotted line in Figure 2. Essentially, this marks the estimated boundary which Anglesey based services would offer greater benefits to passengers than making a 2 to 3hour journey to Manchester Airport to get flights to the same destination.

Forecast Methodologies Used

3.5 In order to differentiate between forecasts of future demand for the core PSO route and those for potential route network enhancements out of both Cardiff and Anglesey this study adopted different forecasting methodologies.

TABLE 2: USAGE FORECASTING SCENARIOUS MODELLED FOR THE PSO ROUTE

1A	Do Nothing-Higher Base Fares
1B	Do Nothing-Lower Base Fares
Potential Service Enhancements	
2A	Longer Day-Higher Base Fares
2B	Longer Day-Lower Base Fares
3A	Third rotation-Higher Base Fares
3B	Third rotation-Lower Base Fares
4A	Larger aircraft-Higher Base Fares
4B	Larger aircraft-Lower Base Fares
5A	Larger aircraft +third rotation-Higher Base Fares
5B	Larger aircraft +third rotation-Lower Base Fares
6A	Do Nothing + Sunday pm rotation-Higher Base Fares
6B	Do Nothing + Sunday pm rotation-Lower Base Fares

Other Potential Sources of Traffic Generation

7A	Improved and Better Resourced Marketing Non-Franchisee Operator-Higher Base Fares
7B	Improved and Better Resourced Marketing Non-Franchisee Operator-Lower Base Fares
8A	Franchise Operator, including GDS and Code Share at Cardiff Airport-Higher Base Fares
8B	Franchise Operator, including GDS and Code Share at Cardiff Airport-Lower Base Fares

3.6 In the former case, where substantial data on historic performance is available, we have relied on making incremental forward projections based on historic performance and several carefully defined assumptions about service enhancements (Outlined in Table 2), to generate a series of transparent variant forecasts for the PSO. A detailed range of forecasts was generated in this way, using patterns in the extensive historical data set for the route, but also experience from other thin routes and PSOs. This resulted in forecasts for variants such as timetable changes and weekend usage, employment of larger aircraft, GDS visibility, different yield management approaches, the operator be a franchisee of a bigger airline and other variables such as increased frequency. The results are reported in the next section of this chapter.

3.7 In the latter case (i.e. the new route options), where PSO data coverage does not exist because there are currently no services, we reverted to traditional industry standard 'bottom-up' route forecasting, using CAA survey data and fairly conservative assumptions about market penetration and stimulation rates.

3.8 Operational constraints and possible enhancements at RAF Valley were reviewed (e.g. opening hours, lack of an overnight hangarage, weekend closure and NASP compliance), as were likely aircraft types on the route. Rough order of magnitude costs of various options were then estimated, relevant European air operators explored and documented, having regard to current airline fleet plans. In combination with the forecasts already generated, this information allowed us to use RDC's Aviation's APEX model to review the commercial viability of different PSO specifications and route options.

3.9 Each short-listed enhancement option thus considered then subjected to an indicative economic impact assessment, highlighting potential job creation or losses, user benefits and annual GVA in order to permit Value for Money (VFM) considerations to be brought into play when evaluating projected levels of subsidy required.

3.10 Finally, the PSO and new route options were subjected to a qualitative review of their relative merits using a Stage 1 WelTAG appraisal methodology. Cost estimates regarding changing the length of the operational day and potentially constructing a hangar in Anglesey were also prepared.

3.11 The key results from all this analysis are summarised in the tables in the results section that follows.

Summary of Key Results

Forecasts Associated with PSO Route Service Enhancements

3.12 The forecast period for the PSO service enhancement options was the period 2017-2022, and made the core assumption that Cardiff retained the based aircraft. The detailed results are shown in an Appendix to the PSO Extension Report but a synopsis of the most realistic combinations (i.e a longer day and larger aircraft; access to GDS and enhanced marketing; and a third rotation) are summarised in Tables 3 and 4 below.

TABLE 3: PAX FORECASTS UNDER VARIOUS PSO SERVICE ENHANCEMENTS

Option Assumptions	Fares*	2015 Pax	2018 Pax	2022 Pax
Baseline Forecasts	High Fare Low Fare	11,000	10,631 11,701	11,173 13,464
2x Daily, Weekdays				
With Longer Day & 31 Seat Aircraft	High Fare Low Fare	11,000	12,281 12,742	12,945 14,593
As above, with GDS and Marketing	High Fare Low Fare	11,000	14,938 15,667	15,738 17,958
3x Daily, Weekdays				
With Longer Day but 19 Seat Aircraft	High Fare Low Fare	11,000	13,183 13,899	13,854 15,819
As above, with GDS and Marketing	High Fare Low Fare	11,000	15,841 16,824	16,648 19,185

Source: Consultants analysis

TABLE 4: PAX FORECASTS UNDER VARIOUS PSO SERVICE SCENARIOS

Option Assumptions	Fares	2018 Pax	Load Factor %	2022 Pax	Load Factor (%)
Baseline Forecasts 19 Seat Aircraft*	High Fare Low Fare	10,631 11,701	54.9 60.4	11,173 13,464	57.7 69.5
2x Daily, Weekdays					

With Longer Day & 31 Seat Aircraft**	High Fare	12,281	38.8	12,945	40.9
	Low Fare	12,742	40.3	14,593	46.1
As above, with GDS and Marketing	High Fare	14,938	47.2	15,738	49.8
	Low Fare	15,667	49.5	17,958	56.8
3x Daily, Weekdays					
With Longer Day but 19 Seat Aircraft***	High Fare	13,183	45.3	13,854	47.7
	Low Fare	13,899	47.8	15,819	54.4
As above, with GDS and Marketing	High Fare	15,841	54.5	16,648	57.3
	Low Fare	16,824	57.9	19,185	66.0

Source: Consultants Analysis

Notes: * Capacity/Per annum = 19,380 seats

** Capacity/Per annum = 31,620 seats *** Capacity/Per annum = 29,070 seats

3.13 To give these results some context, it is worth noting that:

a. The relatively modest growth rates of 1.25% and 1.75% that have been used reflect the fact that that route has been in operation for the best part of nine years and should be seen in the context of Airports Commission 2015 Forecasts which used an average growth of 1.8% per annum between 2010 and 2020 on domestic UK air routes.

b. Reduced fares have already been tested on the Anglesey route. In 2015 the average fare paid fell from around £45 to £33, which means leisure-oriented fares are likely to have fallen from under £40 to, potentially below £30. Thus, if these lower fares are re-instated (as is assumed in the upper estimates under Do Nothing), the scope for generating additional passengers from further price reductions, while also ensuring that the higher average fare paid by business passengers is protected, is low. Arguably, the main way to grow traffic would be from a longer day, Sunday flights etc.-providing a service at times when people want to travel.

c. A franchise arrangement would increase visibility of the route on the internet e.g. on Flybe's website. However, the range of connecting flights at Cardiff is not extensive and many are at times/days that do not fit well with the PSO schedule.

d. Increased visibility on GDS (Global Distribution System of the travel trade e.g. Amadeus, Sabre) is unlikely to transform the commercial prospects for the route, because many of the biggest business users are probably already aware of it. But its enhanced presence in this specialist enhanced area would certainly

help bring the route to the attention of the travel agency and tourism markets, and might help to stimulate some premium leisure demand.

3.14 In their March 2015 study, Arup forecasted 13,000 passengers would use the route in 2018 based on a 19-seater aircraft operation; their principal variation was use of a larger aircraft which they predicted would result in 18,000 users in the same year. Whilst the tables show these figures to be within the range of our own forecasts, we are sceptical that their assumption that a single variant (aircraft size) could result in such a substantial differentiation in outcomes unless supported other variations designed to help stimulate demand (e.g. heavy discounting) in response to available capacity.

3.15 Some combinations of variations in these forecasts (e.g. reduced fares, longer operating day, Sunday rotation and having a franchisee on the route) result in passenger volumes greater than Arup's forecast for a 19-seat plane and some of the variations lead to more than 16,000 passengers per year towards the end of the forecast period. This equates to average load factors well in excess of 80% - compared to the current 60% - indicating that a larger plane would ultimately be required.

Forecasts for Possible Network Extensions (Combined with PSO)

3.16 These are set out in Table 5 and 6 below, which conclude with a column providing an overall route evaluation based on the market analysis undertaken and the demand and load factors projected. The table includes a number of route options that look attractive from both Anglesey and Cardiff, with links to London and major European hubs looking particularly promising.

TABLE 5: THREE ROTATION OPTIONS

Service Routing	Assumptions	Catchment Leakage	Frequency	Competition	Attractiveness over Alternatives	Assumed Market Penetration	Existing Market Captured	Potential Stimulation	Estimated Total Demand	Seat Capacity	Projected Load Factor	Route Evaluation	Comments
Anglesey Base - 3 Rotations													
VLY - ABZ	19 Seat Aircraft (Potentially via Intermediate Point)	5,889	1	Limited: Long by road/rail; or via MAN	High	60%	3,533	20%	4,240	9,690	43.8%	Poor	Better combined with INV
VLY - INV	19 Seat Aircraft (Potentially via Intermediate Point)	9,460	1	Limited: Long by road/rail; or via MAN	High	60%	5,676	20%	6,811	9,690	70.3%	Promising	Better combined with ABZ
VLY - BHD	19 Seat Aircraft (Potentially via Intermediate Point e.g. IOM)	10,715	1	Surface by Ferry via Dublin; or via LIV + MAN	Modest	50%	5,358	20%	6,429	9,690	66.3%	Possible	Drop-in to IoM merits investigation
VLY - London	19 Seat Aircraft (Direct to LUT or NHT)	18,000	1	Surface by road/rail +4hr; or via MAN to LHR - others not served	Modest	40%	7,200	10%	7,920	9,690	81.7%	Good	Depend on Airport + price
VLY - London	31 Seat Aircraft (Direct to LUT or NHT)	18,000	1	Surface by road/rail +4hr; or via MAN to LHR - others not served	Modest	45%	8,100	15%	9,315	15,810	58.9%	Modest	19 seater better until day rtn can be offered
Cardiff Base - 3 Rotations													
Extra Paris	31 Seat Aircraft (Direct to CDG)	24,000	1	Long surface journey; or via BRS/London. Adds second rotation.	Modest	50%	12,000	30%	15,600	22,135	70.5%	Promising	Need code share to work
Frankfurt	31 Seat Aircraft (Direct to FKT)	36,405	1	Long surface journey; or via London.	High	60%	21,843	20%	26,212	22,135	118.4%	Very Good	Strong option even for bigger aircraft
ABZ and INV	31 Seat Aircraft (Direct); ABZ 3/pw, INV 4/pw	16,937	1	Long surface journey; or via BRS/London.	Modest	50%	8,469	25%	10,586	22,135	47.8%	Poor	Market too small for +29 seats
ORK and SNN	31 Seat Aircraft (Direct); ORK 4/pw, SNN 3/pw	15,600	1	Long journey by ferry or via BRS/London. Restores established market; access US	Modest	50%	7,800	50%	11,700	22,135	52.9%	Modest	Might be better seasonal only

Coding: ABZ – Aberdeen; INV – Inverness; BHD – Belfast City Airport; ORK – Cork; SNN – Shannon; VLY - Anglesey

TABLE 6: FOUR ROTATION OPTIONS

Service Routing	Assumptions	Catchment Leakage	Frequency	Competition	Attractiveness over Alternatives	Assumed Market Penetration	Existing Market Captured	Potential Stimulation	Estimated Total Demand	Seat Capacity	Projected Load Factor	Route Evaluation	Comments
Anglesey Base - 4 Rotations (Assumes longer opening hours at VLY can be secured)													
VLY - NHT for London	31 Seat Aircraft (Direct to NHT for LHR)	36,310	2	Surface by road/rail +4hr; or via MAN to LHR - others not served	High	60%	21,786	40%	30,500	31,620	96.5%	Very Strong	Offering day return and NHT crucial
VLY: x1 London + x1 EDI	31 Seat Aircraft (Direct for both services 5 days per week)	23,625	2	Surface by road/rail 3hr to LHR; or via BRS/LHR for EDI	Slight	50%	11,813	45%	17,128	31,620	54.2%	Modest	Would work better with 19 seats. But more ops risk as airrcraft slower
VLY: x1 London + x1 ABZ/INV	31 Seat Aircraft (Direct for both services 5 days per week)	26,500	2	to LHR, Long to ABZ/INV; or via BRS/LHR for EDI	Modest	50%	13,250	40%	18,550	31,620	58.7%	Modest	Would work better with 19 seats. But more ops risk as airrcraft slower
VLY: x1 BHD + x1 ABZ/INV	31 Seat Aircraft (Direct to NHT for LHR)	19,500	2	drive by road/rail, Long to ABZ/INV; or via BRS/LHR for all.	High	60%	11,700	35%	15,795	31,620	50.0%	Modest	Would work better with 19 seats. But more ops risk as airrcraft slower
CWL Base - 4 Rotations													
CWL - London City	31 Seat Aircraft (Direct to NHT for LHR)	38,000	2	Surface by road/rail 3hr	Modest	50%	19,000	28%	24,320	37,945	64.1%	Possible	Costs at LCY means high fare & business only
CWL:Frankfurt and Norwich (Drop-in)	31 Seat Aircraft (Direct to NHT for LHR)	46,000	2	Surface by road/rail +5hr or FT via London	High	55%	25,300	30%	32,890	44,270	74.3%	Promising	NWI drop-in enroute to FKT merits further investigation.
CWL: Brussels and ABZ/INV	31 Seat Aircraft (Direct to NHT for LHR)	25,000	2	Surface by road/rail +6hr or via BRS	High	55%	13,750	40%	19,250	44,270	43.5%	Poor	Needs 19 seat; but even so better prospects elsewhere

Coding: NHT – Northolt; EDI - Edinburgh

APEX Commercial Analysis

Network Enhancement Services from Anglesey

3.17 The tables that follow capture outputs from the Apex model and thus offer insights into the indicative commercial performance of certain aircraft on a number of the most promising routes from the forecasts above. The most promising PSO enhancement options from Anglesey Airport would be a service to London – in this case, Luton was used to exemplify a generic London Airport, but others might equally be possible. The Initial PSO Enhancement Study particularly identified RAF Northolt as a possible London terminus for small regional aircraft because it offers relatively quick road connections by shuttle bus to Heathrow or access by heavy rail or tube into London (see Table 7).

TABLE 7 ANGLESEY TO LONDON

Anglesey Extension Routes	VLY-London	VLY-London	VLY-London	VLY-London
Aircraft (Seats)	DHC6-300 (19)	Dornier 328-100 (31)	DHC6-300 (19)	Dornier 328-100 (31)
Origin	Anglesey Airport	Anglesey Airport	Anglesey Airport	Anglesey Airport
Destination	London Luton Airport	London Luton Airport	London Luton Airport	London Luton Airport
Airline	Generic	Generic	Generic	Generic
Aircraft	DHC6-300	Dornier 328-100	DHC6-300	Dornier 328-100
Load Factor (%)	55	60	95	80
Total Pax	5,434	9,672	18,808	25,842
Average Fare	90	90	90	90
Frequency (wk)	5	5	10	10
Revenue (£)	**500,020.21**	**893,239.48**	**173,0664.36**	**2,386,552.67**
Costs (£)	**819,718.41**	**856,950.16**	**170,8112.62**	**1,771,303.75**

Route Profit/ Loss (£)	**(-319,698.2)**	**+36,289.32**	**+22,551.74**	**+615,248.92**

The idea of introducing small commercial passenger aircraft to Northolt, alongside the commercial business jets it already accommodates in addition to its military and VIP traffic, is a concept Flybe amongst others have been pressing with Government in order to improve regional air access to both London and Heathrow. Northolt is ideally suited to the kind of small aircraft that we have envisaged on this route and the charges should not be dissimilar to Luton or Stansted. The big stumbling block at the moment is MoD resistance to consider a change of use from the current business jet focused operation at Northolt, but this may be something the Welsh Government may be well placed to take up with MoD Ministers or via contacts at RAF Valley. We speculate that a service between RAF Valley and RAF Northolt may prove popular with military personnel as well as with other users.

TABLE 8: APEX PAX ESTIMATES VS LEAKAGE BASED FORECASTS

Aircraft	Route	Estimated	APEX
19 Seat Aircraft (Direct to LTN[10] or NHT)	**VLY - London 1/day**	7,920	6,916
31 Seat Aircraft (Direct to LTN or NHT)	**VLY - London 1/day**	9,315	11,284
31 Seat Aircraft (Direct to NHT for LHR[11])	**VLY - NHT for London 2/day**	30,500	25,842
19 Seat Aircraft (Potentially via Intermediate Point)	**VLY - INV 1/day**	6,811	6,916
19 Seat Aircraft (Potentially via Intermediate Point e.g. IOM[12])	**VLY - BHD 1/day**	6,429	8,866

3.18 Table 8 compares the forecast for the route in Tables 5 and 6, with the level of demand APEX calculates would be needed to produce a breakeven operation, and as can be seen the two are closely matched for a single 19 seat aircraft rotation and about 20% higher than forecast for a 31-seat aircraft flying a single daily rotation. This is because it will be the ability to do a day's business and return that will be the key to capturing a significant share of the traffic currently travelling from North West Wales to Heathrow by road, rail or air from Manchester. Hence it is projected that

[10] London Luton

[11] London Heathrow

[12] Isle of Man

the double daily service using a 31-seat aircraft would be over-subscribed relative to APEX breakeven passenger throughput, based on an average one-way fare of £90 and a lead in of probably closer to £49. This level of fare stands scrutiny against typical single journey costs by road or rail in Table 9.

TABLE 9: SINGLE JOURNEY COSTS TO TARGET DESTINATIONS FROM BANGOR

Bangor to	Rail Cost (Tomorrow at 0700)	Rail Cost 30 days hence off peak	Rail Cost 60 days hence off peak	Time	Distance by road	Car @ £0.45p /mile	Time
London Kings Cross	£161	£94	£88	3h 40m	264	£119	5h 01m
Aberdeen	£150	£150	£150	7h 30m	427	£192	7h 02m
Inverness	£156	£156	£156	9h 00m	452	£203	7h 32m
Edinburgh	£117	£117	£117	5h 00m	298	£134	5h 12m
Glasgow	£122	£40	£47	5h 07m	294	£132	4h 42m
Belfast (via Holyhead ferry)	£49	£49	£49	7h 40m	198	£89	5h 09m

3.19 When similar comparisons are made for prospective routes from Anglesey Airport (VLY) to Belfast and Inverness in Table 10 using a 19-seat aircraft, the results are similarly positive, although it would appear the assumed fare in APEX of £80 to Belfast would need either to be higher to breakeven if volumes remained restricted or lowered to increase market stimulation and generate additional users. The 31 seat aircraft economics was also explored with profit being possible only at higher load factors and fares. At the moment, that service would make a material loss and the Inverness service only works when close to double the predicted traffic on the VLY-INV route is projected, and this seems unlikely.

TABLE 10: ANGLESEY TO OTHER UK DESTINATIONS

Anglesey Extension Routes	VLY-BHD	VLY-BHD	VLY-INV	VLY-INV
Aircraft (Seats)	Dornier 328-100 (31)	DHC6-300 (19)	DHC6-300 (19)	Dornier 328-100 (31)
Origin	Anglesey Airport	Anglesey Airport	Anglesey Airport	Anglesey Airport
Destination	Belfast City Airport	Belfast City Airport	Inverness Airport	Inverness Airport
Airline	Generic	Generic	Generic	Generic
Aircraft	Dornier 328-100	DHC6-300	DHC6-300	Dornier 328-100
Load Factor (%)	55	68	70	70

Total Pax	8,866	6,718	6,916	11,284
Average Fare	80	80	100	100
Frequency (wk)	5	5	5	5
Revenue (£)	720,716.37	544,900.13	712,401.74	1,167,996.29
Costs (£)	835,323.02	713,455.73	1,118,570.04	1,108,115.44
Route Profit/ Loss (£)	(-114,606.65)	(-168,555.6)	(-406,168.3)	+59,880.85

3.20 A single daily service from Anglesey to Amsterdam using a 31-seat aircraft in the middle of the day was considered (see Table 11). CAA data suggests that 19,425 passengers from Anglesey Airport's catchment area are already flying to Amsterdam each year (and that figure excludes those using Liverpool and so more realistically likely well over 20,000. Assuming 40% of these would switch to using a new Anglesey service and that the existence of the route would result in traffic stimulation of 50%, then nearly 11,700 passengers are projected to use the service. This is higher than the projected requirement by APEX based on a £120 one-way fare.

TABLE 11 ANGLESEY TO AN INTERNATIONAL HUB AIRPORT

Anglesey Extension Routes	VLY-AMS
Aircraft Seats	Dornier 328-100 (31)
Origin	Anglesey Airport
Destination	Amsterdam - Schiphol Airport
Airline	Generic
Aircraft	Dornier 328-100
Load Factor (%)	65
Total Pax	10478
Average Fare	120
Frequency (wk)	5
Revenue (£)	1,306,075.73
Costs (£)	1,263,450.24
Route Profit/ Loss (£)	+42,625.49

3.21 All of which points to a single daily Amsterdam service being an interesting one to consider alongside a London link, although with slots becoming scarce at Amsterdam as well as Heathrow, whether a 31-seat aircraft from a small market would be given priority at acceptable cost to gain access to Schiphol is unclear. However, Dundee Airport's service to Amsterdam, which achieved particularly good sales until it was

temporarily switched to Edinburgh for operational reasons, provides a positive precedent.

Economic Impact Assessment

3.22 The indicative economic impacts of the service variants on the PSO Route and new route enhancement options are provided in the next two tables.

TABLE 12: IMPACTS OF THE PSO SERVICE VARIANT OPTIONS

Option Assumptions	Fares*	2015 Pax	2022 Pax	Incremental Pax by 2022	Estimated Direct Jobs	Indirect + Induced Jobs	Total Jobs Created	% Business Pax	Travel Cost Saving per Business Pax (£)	Time Savings per Pax (hrs)	Cost Saving pa - Air vs Road (£)	User Benefits (£)	GVA Per Year (£)
Baseline Forecasts	High Fare	11,000	11,173	173	0.2	0.3	0.5	78%	45	2	6,067	6,742	6,405
	Low Fare		13,464	2,464	3.0	3.6	6.6	68%	55	2	92,142	83,765	87,954
2x Daily, Weekdays													
With Longer Day & 31 Seat Aircraft	High Fare	11,000	12,945	1,945	2.3	2.8	5.2	78%	45	2	68,266	75,852	72,059
	Low Fare		14,593	3,593	4.3	5.2	9.6	68%	55	2	134,360	122,146	128,253
As above, with GDS and Marketing	High Fare	11,000	15,738	4,738	5.7	6.9	12.6	78%	45	2	166,308	184,787	175,548
	Low Fare		17,958	6,958	8.4	10.2	18.5	68%	55	2	260,246	236,587	248,416
3x Daily, Weekdays													
With Longer Day but 19 Seat Aircraft	High Fare	11,000	13,854	2,854	3.4	4.2	7.6	78%	45	2	100,188	111,320	105,754
	Low Fare		15,819	4,819	5.8	7.0	12.8	68%	55	2	180,246	163,860	172,053
As above, with GDS and Marketing	High Fare	11,000	16,648	5,648	6.8	8.2	15.0	78%	45	2	198,230	220,255	209,242
	Low Fare		19,185	8,185	9.8	12.0	21.8	68%	55	2	306,132	278,302	292,217

TABLE 13: ECONOMIC IMPACTS OF THE POTENTIAL EXTENSION ROUTES

Service Routing	Estimated Total Demand	Estimate of Generated Traffic	Projected Load Factor	Route Commercial Evaluation	Estimated Direct Jobs	Indirect + Induced Jobs	Total Jobs Created	% Business Pax	Travel Cost Saving per Business Pax (£)	Time Savings per Pax (hrs)	Cost Saving pa - Air vs Road (£)	User Benefits (£)	GVA (£/m)
Anglesey Base - 3 Rotations													
VLY - ABZ (19 seats)	4,240	707	43.8%	Poor	5	7	13	60%	80	4.0	186,564	443,088	0.630
VLY - INV (19 seats)	6,811	1,135	70.3%	Promising	8	12	20	30%	80	5.0	149,846	444,857	0.595
VLY - BHD (19 seats)	6,429	1,072	66.3%	Possible	8	11	19	35%	140	6.0	288,769	587,852	0.877
VLY - NHT (19 seats)	7,920	720	81.7%	Good	10	14	23	45%	20	2.0	68,040	323,190	0.391
VLY - NHT (31 Seats)	9,315	1,215	58.9%	Modest	11	16	27	45%	20	2.0	78,368	372,246	0.451
Cardiff Base - 3 Rotations (All 31 seats)													
Extra CDG	15,600	3,600	70.5%	Promising	19	27	46	40%	120	6.0	662,400	1,821,600	2.484
FRA	26,212	4,369	118.4%	Very Good	31	46	77	65%	210	10.0	3,279,699	8,589,688	11.869
ABZ and INV	10,586	2,117	47.8%	Poor	13	19	31	40%	115	5.5	438,248	995,585	1.434
ORK and SNN	11,700	3,900	52.9%	Modest	14	20	35	20%	95	6.0	185,250	643,500	0.829
Anglesey Base - 4 Rotations (Assumes longer opening hours at VLY and all 31 seats)													
VLY - NHT x2	30,500	8,714	96.5%	Very Strong	37	53	90	60%	30	2.0	470,581	1,490,174	1.961
VLY - NHT x1 + EDI x1	17,128	5,316	54.2%	Modest	21	30	51	60%	50	3.5	434,104	1,443,395	1.877
VLY - NHT x1 + ABZ/INV x1	18,550	5,300	58.7%	Modest	22	32	55	65%	50	4.5	516,750	2,209,106	2.726
VLY - BHD x1 + ABZ/INV x1	15,795	4,095	50.0%	Modest	19	28	47	45%	110	5.5	680,501	1,616,190	2.297
CWL Base - 4 Rotations (All 31 seats)													
CWL - LCY x 2	24,320	5,320	64.1%	Possible	29	43	72	75%	0	2.5	0	1,929,094	1.929
CWL - FRA + NWI (Drop-in) x 2	32,890	7,590	74.3%	Promising	39	58	97	60%	130	7.5	2,269,410	7,201,013	9.470
CWL - BRU + ABZ/INV x 2	19,250	5,500	43.5%	Poor	23	34	57	60%	100	5.5	990,000	2,994,750	3.985

3.23 The results suggest that the enhancements to the existing PSO service generate only small incremental economic benefits, but that some of the 'extension' routes using the PSO aircrafts down time could be very positive in terms of economic returns for any support provided, with Frankfurt substantially ahead of the others because of distance, but London and Amsterdam also demonstrating potentially material benefits.

Qualitative Appraisal of Long List

3.24 The non-quantified qualitative impacts arising from this appraisal chapter, and used to generate the WelTAG tables in the next, are summarised for convenience below in Table 14 for network enhancements from Anglesey and Table 15 for network enhancement options from Cardiff Airport.

TABLE 14: SUMMARY OF IMPACTS OF POSSIBLE AIR SERVICE NETWORK ENHANCEMENTS FROM ANGLESEY

Type of Enhancement	Impact	Intensity of Impact
Better PSO timetable	Improved popularity with Welsh residents and more productive trips possible	+
More capacity on PSO route	Will diversify usage with a presumed wider range of fares. Will also prove more useful for inbound tourism promotion from South Wales	+
Anglesey based Aircraft		
Double daily link with Northolt	Would be transformative in globalising the region and making it more accessible to a range of other long haul countries and the important London market. A smooth interchange with LHR would be imperative.	+ + +
Daily or double daily link with other London Airport	Would be transformative in raising the profile of the region in the EU and making it more accessible to a range of other destinations that also link with that London airport – even with self-connecting, and also the important London market	+ **OR** + +
Links with new British Isles Destinations	The Scottish market would be important for the Energy Island – Irish destinations which all offer different business and tourism opportunities - the Crown Protectorates would have less business impact	+ **OR** + +
Cardiff Based aircraft		

Enhanced connections at Cardiff	North Wales could also benefit from any onward connections at Cardiff if the same aircraft was used and if the timetabling was reasonably seamless. Conversely new destinations could more seamlessly access North Wales for short breaks via Cardiff.	+ **OR** + +

Note Plus signs (+ + +) indicate Intensity of impact with minus sign (-) indicating little or neutral.

TABLE 15: SUMMARY OF IMPACTS OF POTENTIAL AIR SERVICE NETWORK ENHANCEMENTS FROM CARDIFF AIRPORT

Type of Enhancement	Impact	Intensity of Impact
Better PSO timetable	Improved popularity with N Welsh residents. Less beneficial to Cardiff catchment	-
More capacity on PSO route	Will diversify usage with a presumed wider range of fares	+
Cardiff Based aircraft		
Double daily to LCY	This would be particularly welcome for the Financial sector, and there are a range of onward destinations at LCY that would also be of interest	+ + +
Additional frequency to Paris	This would facilitate business in both Paris and its substantial range of onward connections	+ + +
Once / day to Frankfurt	A welcome addition to Wales destination board and possible Norwich elaboration might also be welcome	+ +
North of Scotland	Potential to serve Inverness, improve links to Aberdeen and perhaps use intermediary stops such as LBA or NCL could all have utility	+ +
Southern Ireland	Cork and Shannon would be useful destinations to reassert at Cardiff	+ +
Channel Isles	Strengthening links with the Channel Isles would be welcome, but not particularly transformative	+
Cardiff enhancements	Some of these near Europe, Irish, Channel Isle and Norwich enhancements would be of interest to Anglesey catchment and would drive some through traffic	+
Anglesey based Aircraft		
Links with new British Isles Destinations	New Links to Inverness, Belfast, and IOM might be of utility to the Cardiff catchment	+ +

Conclusions and Recommendations from the Route Extension Study

3.25 Whatever mix of potential delivery mechanisms is employed to optimise PSO associated route network enhancements, it is clear from our analysis and the appraisal that a key decision is going to be whether those enhancements will have a North or South Wales centric complexion. There are also trade-offs to be made between additional capital costs in Anglesey, the need for a bigger PSO aircraft if Cardiff is to benefit and the distribution of connectivity benefits at either end of the route.

3.26 However, the decision on this does not need to be made immediately as several important preparatory building blocks need laid in the meantime. Ideally the development of some sort of consensual political will for a project that straddles political cycles; identification of budgets; the key role that RAF will play in this, the availability of Northolt for scheduled flights and further investigation as to suitable state aid facilitation measures still need to be undertaken.

3.27 Summarising the recommendations made in the Technical Report we suggested the following milestone steps were actioned:

i. Prepare current PSO Invitation to Tender (ITT) assuming CWL based aircraft. Leave room for elaboration before or during PSO (e.g. change in operating hours). Find a way to turbo charge route marketing to ensure patronage grows, as this reduces risk and cost on subsequent elaborations. ii. Commence dialogue with the RAF/DIO to discuss:

- Longer weekly opening hours;
- Possible weekend opening, even if only for occasional special 'charters';
- Potential to base aircraft in Anglesey and implications (e.g. hangar and larger enclave footprint);
- NASP adaptions and timescales; - Cost.

iii. Complete a more detailed assessment of NASP in parallel with these discussions; quantify cost, obtain quote for equipment, agree with RAF and establish timescales.

iv. Undertake socio economic studies to see if PSOs from VLY-London and or Amsterdam can be justified, and similarly appropriate forms of route support for an additional daily frequency to Paris or new routes to London or Frankfurt can be justified/maintained. This will require more detailed work, including potentially visitor surveys, to be undertaken on the North-West Wales tourism market so the potential benefits of enhanced connectivity can be properly understood and assessed.

v. The most promising London option for both Anglesey (and possibly Cardiff) until the third runway is built at Heathrow, is a service to RAF Northolt, and the Welsh Government should attempt to negotiate an agreement with the MoD to facilitate this.

vi. In tandem, it would be appropriate to draft, and then seek approval on a Welsh RDF[13] scheme, which can be used both on PSO route enhancements and other route enhancements at CWL and VLY.

vii. In the autumn of 2016[14] award a PSO contract until end 2020. Ideally this will include a 2018 break clause if the operator is not willing to contemplate aircraft upgrades or other route opportunities. Subsequently it has been agreed with the Welsh Government that it would be better to seek a temporary extension to the existing contract to allow proper planning for a new PSO contract in 2018.

viii. This makes it important that the extra time available is used for careful planning of the re-tender and for considerations such as infrastructure preparations (e.g. the hangar, requisite car park and road re-alignments improvements to permit basing of an aircraft in Valley largely using the current civilian footprint) to be addressed.

ix. It is also important that the Welsh Government takes time to confer with CWL and air operators on various route options and available state aid before the new tender is published.

x. This in turn will help to refine the final PSO ITT which ideally should be published at least one year before start date. This additional time will be used to better evaluate the various enhancement options; tie down the bidders into some sort of credible commitments on their additional route development initiatives, and allow time to launch any new routes with a better chance of success.

xi. Shortly after award of the 2018 PSO we would recommend that preparations begin on the subsequent PSO, which ideally will be building on the work of the previous 6/7 years.

xii. Whichever company is appointed as PSO operator, it must be obliged to develop a comprehensive marketing plan for not only the PSO route but also any enhancements, which is shared and bought into by relevant partners and properly funded in order to make a substantive impact.

3.28 In addition to the above, we also offered a series of other more detailed recommendations that were more tactical in nature:

a) Ensure that the DfT and the new runway sponsor (LHR in all likelihood) are clear that Wales expects to have slots for both Cardiff and Anglesey Airports when any additional runway capacity becomes available. Flag that the expectation is that these will be protected by PSOs.

[13] Route Development Fund is an EU state Aid approved category of route support under specified circumstances and principles

[14] Please note during the authoring of the various reports the timetable of possible PSO commencement dates evolves. These dates should be considered as illustrative rather than definitive.

b) Express support to the DfT for the use of Northolt as an interim measure whilst new runway capacity is made available. This is likely to be of more interest from Anglesey than from Cardiff because of its shorter terrestrial access times.

c) Review with the RAF/DIO whether the JSP360 funding model works best for the Anglesey Airport civilian enclave. For instance, a fixed annual fee rather than JSP360 discounted fee might work better. There is concern that additional civilian business that could be attracted to the airport by the marketing efforts of the national and regional stakeholders would solely benefit the RAF. This does not seem fair, and does not incentivise various bodies to optimise the economic and tourist potential of the civil side of the airport (which they are funding). Additional charters using the PSO aircraft, business and general aviation, IT [15] charters and limited weekend opening in the meantime should also be explored.

d) United and Coordinated Stakeholder Action for instance in Marketing - Air operators prefer to work with a united and coordinated group of stakeholders when launching and developing their route. They also prefer to be able to negotiate with one representative of the region rather than several different agencies. The Irish and Scottish Government approaches to route support offers a model, and in regional France they often have a Syndicate Mix with a President, (usually advised by the local airport) who is empowered to make deals with the airline.

e) The ITT and PSO contract terms will be very important in ensuring WG aims are well aligned with air operator aims. Some examples were provided in the conclusions of the 2016 *Demand Forecasting, Economic Analysis and Exploring Extending the Aircraft Size and Operating Hours at Anglesey Airport* report.

f) Innovation - It is recommended that options are introduced into the tender competition so that different operator solutions are encouraged and can be compared against the PSO programme aims. The Invitation to Tender can invite operators to offer other solutions that fulfil the programme aims by means unanticipated in the specifications. The Government should retain the flexibility to entertain novel solutions.

g) More than six months' notice - The PSO regulations (Regulation No. 1008/2008) require procuring authorities to give 'at least' six months' notice of intention to award a PSO. Nearly all have interpreted this in practice to mean (invariably) six months. For the complexity of marrying a PSO with other enhancements being considered here we would strongly recommend that WG offer more like 12 months on their ITT. This permits proper preparation, pre-marketing, smooth handover and thorough preparation and pre-marking of any additional routes. The aim should be to award the PSO contract at least three months before start date.

h) Use trialling to avoid re-tendering - If there is a desire to change the specification of a PSO during the term of the contract this can only be properly achieved with a full retender. However minor anticipated changes can be covered by trials, which can be periodically reviewed and dropped if unsuccessful. We would recommend that many aspects (such

[15] Inclusive Travel such as Package Holidays

as yield maximisation experiments, even timetable details) are presented as trials that can be tweaked without triggering a full re-tender.

i) Test Options and anticipated different solutions - It may well be that the tendering process itself presents different route enhancement options for selection by the Welsh Government. The Welsh Government cannot micro-manage the desired route initiatives and it should also be noted that different operators will have differing analysis and different assessment of operational convenience.

j) PSO incentives - Some PSO contracts, because of their deficit funding clauses, can create poor incentives to develop the route or assign adequate resources to marketing. In other words, any improvement in the route revenue will be used to reduce the subsidy, and not benefit the airline [16]. Authorities are increasingly addressing this contractual anomaly.

k) PSO Route Development Plan - A persuasive route development plan that explains how route revenues can be developed and patronage can be increased should be encouraged and rewarded in the assessment of tender bids, and these efforts should be reflected in year on year passenger and revenue growth projections, and targets presented in the submission.

l) The Maximum Fare tool is a rather blunt instrument to ensure affordability and maximum participation. The airline and sponsoring authority will have different ambitions with regard to average yield and numbers travelling and clear guidance and influence should be applied to the pricing policy, which as we appreciate from the route forecasting can result in very different numbers travelling.

m) PSO proposal Evaluation Criteria. According to the regulation the subsidy requested is only to be a main and not the only determinant of the preferred bidder. Other criteria can be developed to reward solutions that better suit the wider strategic objectives of the Welsh Government.

n) Conceptualise a progressive range of enhancement steps and timetable that can be committed to, and then monitored, particularly against key milestones (e.g. increases in route patronage, NASP quantified, RAF quantified, PSOs/RDFs delineated, stakeholders jointly committed).

3.29 Based on the foregoing the immediate next steps can be summarised as follows:

- Create (possibly consult on) a formal exposition of the PSO programme aims, which then can act as a reference point for much subsequent action.
- Enter dialogue with RAF/DIO on a range of enhancement possibilities.

[16] **Merkert, R. and O'Fee, B. (2013)** Efficient procurement of public air services - Lessons learned from European transport authorities' perspectives, Transport Policy (June 2013)

- Finalise the current ITT with whatever simple enhancements can be incorporated within the pressing timescale – we suggest:

  - Extended day if agreeable with RAF within the timescale and budget of Department -

    Enhanced and better resourced marketing

  - Incentives for the air operator to cooperate in that marketing

  - Consideration on how best to positively influence the yield management policy to broaden participation in service usage

  - Pre-agree some additional 'PSO' weekend schedules at outset of each year (e.g. Rugby, Football, TT races, Christmas shopping, stand out events)

  - Positively score any voluntary route enhancements by the bidders

3.30 The conclusions and recommendations have been encompassed within the Recommendations and Next Steps in Section 10 of this report.

4 THIN ROUTE DEVELOPMENT OPTIONS FROM CARDIFF INTERNATIONAL AIRPORT

4.1 As there was a significant amount of overlap between the draft work already undertaken on a *Cardiff Airport: PSO Thin Routes* and the *Welsh PSO route enhancement study (see Table 1)*; it was proposed that the outputs of both studies might usefully be combined in one more comprehensive exercise identifying short haul routes that are likely to require Welsh Government intervention if they are to be secured and consolidated over the next 3-5 years.

4.2 The PSO work explored routes that it might be possible to serve with aircraft in the 19-34 seat category as an adjunct to the core PSO service; this Thin Route study focused on routes to and from Cardiff (CWL) of 50,000 passengers a year or less, and therefore less likely to be commercially viable on a free-standing basis than those with a potential market larger than that. The report used an equivalent appraisal to ease comparison with PSO enhancement options.

4.3 Using a similar approach to the prior PSO enhancement study the study team were not constrained by having to use the 'Anglesey' PSO aircraft and were also seeking routes that could survive on a basis other than a PSO e.g. normal route development incentives and Route Development Funds.

4.4 Demand was estimated from catchment leakage as derived from CAA passenger surveys and commercial viability was tested using APEX modelling as before.

4.5 A range of routes were identified and scored based upon quantitative and qualitative criteria. Some key issues include fares vs surface modes or competitiveness vs Bristol fares. Both studies were concerned with state aid interventions; that are legal and capable of contributing substantively to route development.

4.6 The study concludes that there are between 10-15 worthwhile route development opportunities from Cardiff that are not outbound leisure orientated (there is probably another 10-15 of these as well), which a mixture of RDF and DMF[17] funding could help to support and for which there is potentially an economic case to do so. Further work is needed to develop a methodology that will satisfy green book requirements[18] and allow value for money to be demonstrated, but the core work to justify commissioning a more in-depth evaluation of that kind, covering Cardiff as well as Anglesey, is provided by the analysis in this report and the accompanying PSO extension study.

4.7 This report considers five facilitative mechanisms which could play a role in route development:

[17] Destination Marketing Funds are a common way that public funds support key routes within specified limits.

[18] HM Treasury guidance for public sector bodies on how to appraise proposals before committing funds to a policy, programme or project

i. Public Service Obligations (PSOs);

ii. EU approved state or locally sponsored Route Development Funds;

iii. Destination marketing initiatives;

iv. De-minimis funding; and

v. Normal airport funded route support packages.

Summary of Thin Route Study Review

TABLE 16: THIN ROUTE APPRAISAL IDENTIFIED 10-15 POSSIBLE ROUTE INITIATIVES

	Frequency of rotations / week	Benefit to Wales PLC	Likelihood of Delivery	Delivery Mechanism
United Kingdom				
Norwich Airport	5 / week twinned with near Europe	✓	✓	RDF
Aberdeen Airport	3/6 week & enhance current service	✓✓	**Significant doubt**	normal route dev
Inverness Airport	3/5/6 week	✓	✓	RDF
Leeds/Bradford	4/5 twinned with Scotland?	✓	**Significant doubt**	RDF
London City	10 (not modelled)	✓✓	✓	PSO
Crown Dependencies				
Isle of Man Airport	3 shared with Guernsey	✓	✓	normal route dev
Guernsey Airport	3/week	**Minor or neutral**	✓	normal route dev
S Ireland				
Cork Airport	5/6 or shared	✓✓	✓✓	normal route dev
Shannon Airport	3/week	✓	✓	RDF
Near Europe				
Paris - CDG Airport	5 in addition to current	✓✓✓	✓✓	PSO
Brussels Airport	4/5 week	✓✓	✓	RDF
Berlin - Schoenefeld	2 shared	✓	✓	RDF
Zurich Airport	2 shared	✓	✓	RDF
Hamburg Airport	4/5 week	✓✓	✓	RDF
Frankfurt Airport	5/6 week	✓✓✓	✓✓	RDF
Frankfurt Airport	10 (slots?)	✓✓✓	**Significant doubt**	PSO / RDF
Geneva Airport	3/week	✓	✓	RDF
Oslo Airport	1/week	✓	**Significant doubt**	RDF
Toulouse - Blagnac	4 / week	✓✓✓	✓✓	RDF
Bordeaux Airport	2 shared	✓	✓	RDF

Far Europe				
Milan - Linate Airport	3/5 week	✓✓	✓	RDF
Rome - Fiumicino	3/week	✓	✓	RDF
Rome - Fiumicino	5week	✓✓	✓	RDF
Istanbul - Ataturk	3/5 week	✓✓	**Significant doubt**	RDF
The ✓ scoring symbol indicates strength of assessment and the colour coding is to distinguish the delivery options				

5 EVALUATION OF NASP COMPLIANCE - ANGLESEY AND HAWARDEN AIRPORTS

5.1 One of the key components of aviation security within the UK is the National Aviation Security Programme. This is the Government standard that ensures the national requirements, policies and procedures covering all relevant provisions for aviation security within the implementing regulations under UK and EU law, are defined. All aircraft with either a maximum take-off weight (MTOW) of 10,000 kg and/or more than 19 seats are required to come under the provisions of NASP. Additionally, under NASP, a Security Restricted Area (SRA) and/or Critical Part (CP) thereof, must be established at the airport and clearly marked as the defined airside area in which the aircraft to be used, is stationed, and into which all those persons with a legitimate need to access the CP, may do so. This will include screened baggage, passengers, vehicles and staff. Protection of the SRA/CP is the main priority within the provision of NASP. Designation of the SRA/CP will need to be agreed with and approved by the regulator prior to the commencement of any NASP operations.

5.2 This report built upon work that indicated options where 19+ seat aircraft could operate out of Anglesey Airport and would therefore have to comply with this more stringent set of security standards.

5.3 A 2015 Quelltex report for the Isle of Anglesey County Council (IACC) on potential NASP compliance at Anglesey Airport which built upon an earlier 2009 report by Quelltex on the same topic, were made available to this study. The report was also informed by site visits to Hawarden and Anglesey Airports and discussions with Airbus, APG, Bilfinger Terminal staff and Isles of Anglesey Council.

5.4 The study did also undertake visits to other Welsh regional airports, although it was judged unlikely that inclusion under NASP would be required within any likely route enhancement scenario at these other airports.

5.5 The report estimated that Anglesey would require an approximate spend of circa £750,000 to become NASP compliant and Hawarden Airport between £1.36m - £2.3m, dependent upon whether a new terminal was required to be built alongside NASP compliance. The APG enclave at Hawarden was acknowledged as the best area to host such a development. In terms of timescales it would be prudent to allow 6-8 months to complete the transition as it requires new equipment to be purchased, staff to be trained, airport operators (RAF and Airbus to cooperate) and regulatory approval to be gained.

5.6 The Anglesey c£750k figure is a best estimate for what it would cost to be fully compliant for the change to level 3 for hold baggage screening by Sep 2018. That figure also includes new cabin baggage system which anticipates an imminent change to that requirement. This is what has been done at Newquay Airport for instance to future-proof themselves. Also, this level of equipment will be adequate for well in excess of 60K passengers p.a. as long as there is room for them to queue up. Anecdotally, Newquay

has only one security ‘arch’ and is expecting to be able to process 400K+ passengers with 2 machines running some of the time.

5.7 It may be possible to negotiate removing electronic security completely for a 19 seat Welsh PSO, especially as so few passengers are interlining at Cardiff Airport. Such an arrangement has recently been secured, with CAA approval in Scotland at airports such as Campbeltown, Tiree and Barra flying into Glasgow. Nonetheless until NASP compliance is achieved at Anglesey Airport, it would not be possible for southbound passengers to interline seamlessly as, on arrival from Anglesey, they would need to reclear security (at Cardiff Airport) in order to continue their onward air travel.

6 AIRCRAFT-RELATED CONSIDERATIONS ASSOCIATED WITH WELSH PSO PROCUREMENT

6.1 The study team were asked to examine the impact that certification of single engine turbine (SET) aircraft for commercial public transport services by the *European Aviation Safety Agency (EASA)* might make on the viability of the different routes under consideration, and to consider the potential role of Alternative Ownership and Operating Models where the Welsh Government might facilitate desired innovation.

6.2 The study considered two representative SET types from a range of operational and perspectives, and the type does offer possibilities within Wales under certain options.

6.3 The potential for cost savings is not dramatic in the short term, but the potential for downstream intra Welsh route elaboration does exist, although most of these possibilities, it is suggested, are revisited in 3-5 years.

6.4 Two types were examined in detail as being representative of the 'class'. The Cessna Grand Caravan (unpressurised) and the Pilatus P12 (pressurised). A pressurised aircraft delivers a superior passenger experience, by flying 'above the weather', avoiding decompression discomfort and, because of height, requiring fewer emergency divert airfields.

6.5 Some savings are possible (see table 17), but not so significant if the more attractive Pilatus P12 is selected. A series of cost estimates were made on both the existing route and some possible other intra-Welsh routes (Table 18).

TABLE 17: COST COMPARISON - INCUMBENT BASE CASE (LET410) VS ALTERNATIVE S.E.T.S

Anglesey to Cardiff (x2 daily M-F)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
LET 410 – 17 seat	16660	967,000	Base
Cessna Grand Caravan – 9 seat	8820	773,000	-194,000
Pilatus PC12 – 9 seat	8820	946,000	- 21,000

Anglesey to Cardiff (x3 daily M-F)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
Cessna Grand Caravan – 9 seat	13230	948,000	- 19,000
Pilatus PC12 – 9 seat	13230	1,129,000	+ 162,000

Anglesey to Cardiff (x4 daily M-F)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
Cessna Grand Caravan – 9 seat	17640	1,122,000	+ 155,000
Pilatus PC12 – 9 seat	17640	1,313,000	+ 346,000

TABLE 18: COST COMPARISON - INCUMBENT BASE CASE (LET410) VS ALTERNATIVE S.E.T.S FOR

NEW ROUTES

New route options:

Hawarden to Cardiff (x2 daily M-F + x1 daily Sat/Sun)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
LET 410 – 17 seat	20400	1,345,000	Base
Cessna Grand Caravan – 9 seat	10800	987,000	- 358,000
Pilatus PC12 – 9 seat	10800	1,201,000	- 144,000

Hawarden to Cardiff (x3 daily M-F + x2 daily Sat/Sun)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
LET 410 – 17 seat	32300	1,771,000	Base
Cessna Grand Caravan – 9 seat	17100	1,256,000	- 515,000
Pilatus PC12 – 9 seat	17100	1,505,000	- 241,000

Hawarden to Haverford West (x2 daily M-F + x1 daily Sat/Sun)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
LET 410 – 17 seat	20400	1,277,000	Base
Cessna Grand Caravan – 9 seat	10800	933,000	- 344,000
Pilatus PC12 – 9 seat	10800	1,147,000	- 130,000

Cardiff to Haverford West (x2 daily M-F + x1 daily Sat/Sun)

Aircraft Type	Seat Capacity (PA)	Op Cost Estimate (£ PA)	Ops Cost relative to base/estimated change in PSO Subsidy (£ PA)
LET 410 – 17 seat	20400	1,214,000	Base
Cessna Grand Caravan – 9 seat	10800	893,000	- 321,000
Pilatus PC12 – 9 seat	10800	1,110,000	- 104,000

6.6 Table 18 examines potential cost savings on possible new intra-Welsh routes and does illustrate some quite significant savings. For instance, at Haverfordwest [19] a 9-seater aircraft would also likely remove the need for security infrastructure to be installed, and suggests a very simple customer terminal waiting area would suffice delivering further savings.

6.7 Care needs to be taken with regard to public acceptance and confidence in the aircraft type and single engine concept.

[19] Haverfordwest is an airport in West Wales run by Pembrokeshire County Council that does not currently cater for commercial scheduled air services.

7 FUTURE OPTIONS FOR AVIATION PSO'S IN WALES

7.1 The Welsh Government commissioned a wider-ranging review of the prospects for internal scheduled air transport services in Wales. This included options for reducing the costs/subsidy per head of the extant Valley service, comparing that service routing against a possible alternative from Hawarden to Cardiff and then latterly looking at the prospects for internal services from Haverfordwest and the other smaller airports in Wales and different combinations thereof.

7.2 It was established from passenger surveys, that the use of the PSO is much more diverse than is pre-supposed (Figure 3); 25% of pax surveyed were on their first PSO flight suggesting a significant 'churn' of users (Figure 4). The presence of regular users also indicates that a real benefit is being delivered by the service. Two thousand separate people and about six thousand different people should use the route over a 4 year PSO period.

FIGURE 3A: 2016 PASSENGER SURVEY – BUSINESS TRAVELLERS ANALYSED

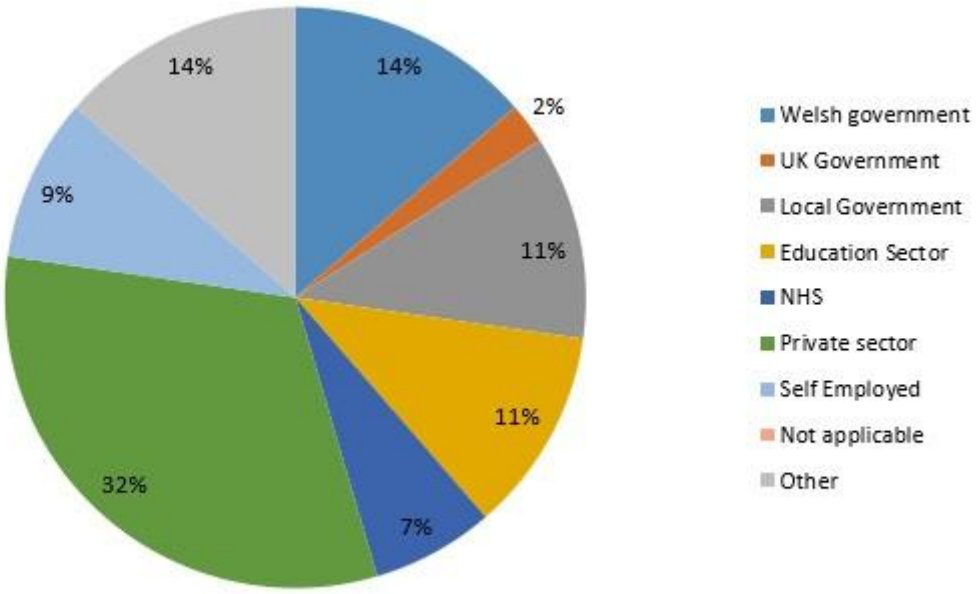
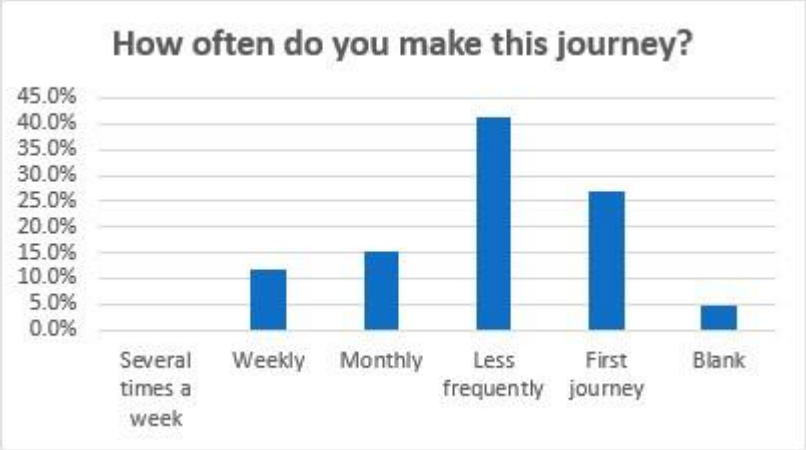


FIGURE 4: 2016 PASSENGER SURVEY – HOW OFTEN DO YOU MAKE THIS JOURNEY?



7.3 The work was undertaken in two key parts; the first of which was to include reduction of, or even closure implications on, the PSO service. In addition, Hawarden was also examined with regard to a PSO to Cardiff and also other route development opportunities out of the airfield – assuming that scheduled air services were established there.

TABLE 19: IMPACT ON JOBS UNDER VARIOUS SCENARIOS

	Assum'd Pax Nos in 2017	Estimated Direct Jobs	Indirect + Induced Jobs	Total Jobs Supported
Ceasing all provision	-9000	-10.8	-16	-27
Reducing frequency of flights	7200	8.64	13	21
Maintaining the status quo - change little	9000	10.8	16	27
Maintaining status quo with changes (timetable, marketing and operator incentives)	11000	13.2	19	32

7.4 Approximately 30 jobs are involved in providing the current level of service (Table 19). If the PSO aircraft can find other tasks, then the jobs created approximately double. If access to LHR is achieved, significant multiples of current employment are created (see Tables 20).

TABLE 20: IMPACT ON JOBS FOR EXPANSIONIST SCENARIOS

Pax Forecasts	Est. 2022 Pax Nos	Estimated Direct Jobs	Indirect + Induced Jobs	Total Jobs Supported
Maintaining status quo with changes (timetable, marketing and incentives)	13,000	15.6	23	38
Increasing usage - adding other routes/services (assumes move to 30 seater in 5 years) and Franchise / GDS marketing	18,000	21.6	32	53
Illustrative enhancement CWL-FRA via NWI	20,800	24.96	36	61
Basing aircraft in Anglesey (capital costs) Hanger and NASP	17,000	20.4	30	50
Illustrative enhancement VLY-NHT or VLY-LHR	99,000	118.8	173	292

7.5 The current subsidy approximates to current benefits. Increasing usage on current services increases VFM[20]. Additional aircraft use and LHR access delivers some much larger prizes (see Table 21 & 22).

TABLE 21: ECONOMIC IMPACT (GVA) UNDER CORE SCENARIOS

[20] Value for Money

Pax Forecasts	Est. 2017 Pax Nos	% Business Pax	Travel Cost Saving per Business Pax (£)	Time Savings per Pax (hrs)	Cost Saving pa - Air vs Road (£)	User Benefits (£)	GVA (£/m)
Ceasing all provision	-9,000	62%	£48	2.5	-£267,840	-£1,125,000	-£1.39
Reducing frequency of flights	7,200	62%	£48	2.5	£214,272	£900,000	£1.11
Maintaining the status quo - change little	9,000	62%	£48	2.5	£267,840	£1,125,000	£1.39
Maintaining status quo with changes (timetable, marketing and operator incentives)	11,000	62%	£48	2.5	£327,360	£1,375,000	£1.70

TABLE 22 ECONOMIC IMPACT (GVA) UNDER VARYING SCENARIOS

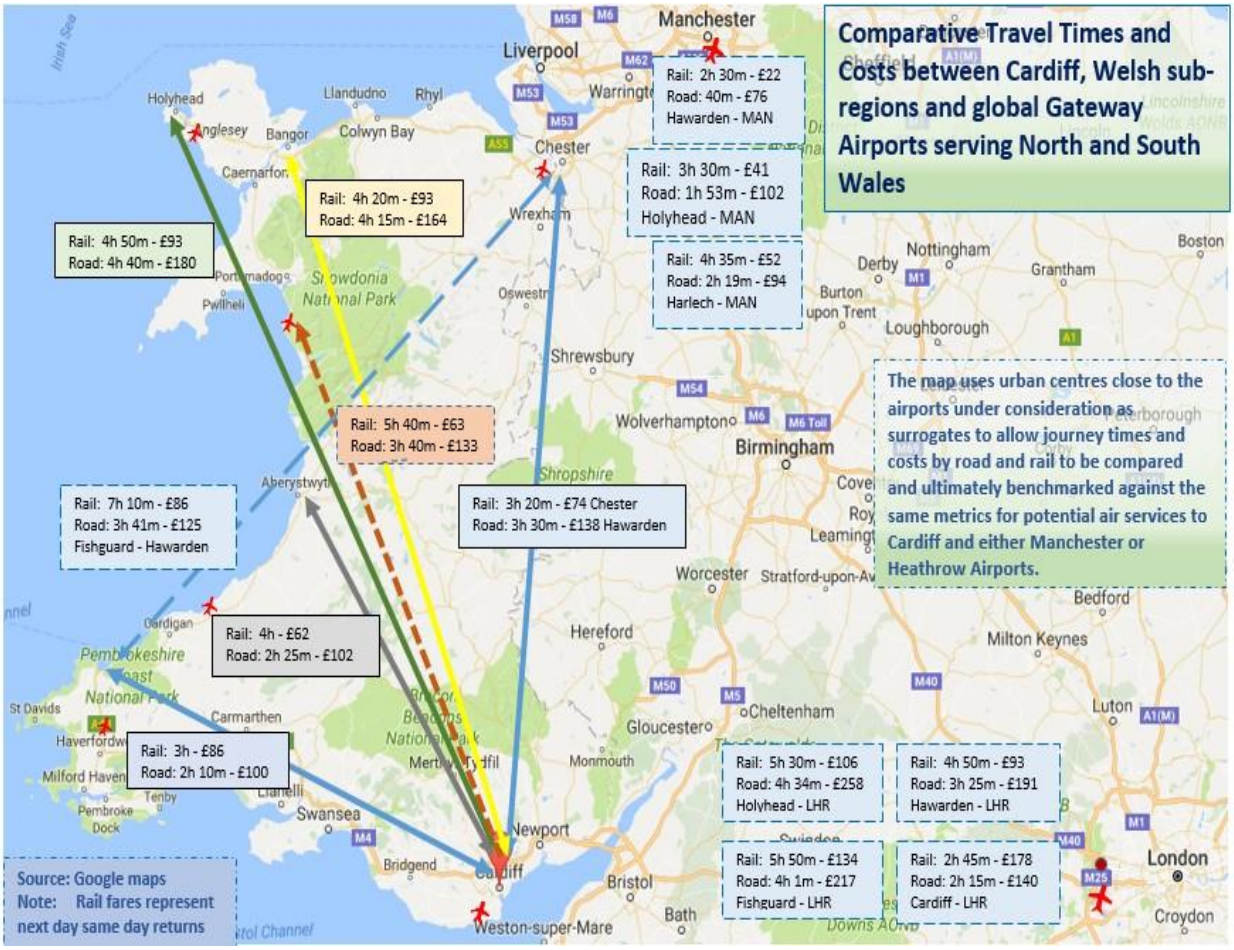
Pax Forecasts	Est. 2022 Pax Nos	% Business Pax	Travel Cost Saving per Business Pax (£)	Time Savings per Pax (hrs)	Cost Saving pa - Air vs Road (£)	User Benefits (£)	GVA (£/m)
Maintaining status quo with changes (timetable, marketing and incentives)	13,000	62%	48	2.5	£20,150	£1,625,000	£1.65
Increasing usage - adding other routes/services (assumes 30 seater in 5 years & GDS marketing)	18,000	62%	48	2.5	£27,900	£2,250,000	£2.28
Illustrative enhancement CWL-FRA via NWI	20,800	68%	55	7.5	£106,080	£7,800,000	£7.91
Basing aircraft in Anglesey (capital costs) Hanger and NASP	18,000	62%	48	2.5	£27,900	£2,250,000	£2.28
Illustrative enhancement VLY- NHT or VLY-LHR	99,000	68%	48	4.5	£302,940	£22,275,000	£22.58

7.6 n the second phase of the PSO Review, the prospects for other airfields such as Caernarfon, Llanbedr, Aberporth, Mid Wales Airport, Haverfordwest, Swansea and Pembrey were also considered from the point of view of possible PSO air services. They were each rejected on the grounds set out in the substantive supporting technical report, with only Haverfordwest identified as having a possible medium term role, leaving us with

potentially four airports still under consideration, each of which served a different part of Wales.

7.7 We then compared travel times and costs between Cardiff, Welsh sub-regions and global gateway airports serving Wales – most notably Manchester and Heathrow. The results are summarised in Figure 5.

FIGURE 5: COMPARATIVE TRAVEL TIMES AND COSTS BETWEEN CARDIFF, WELSH SUB-REGIONS AND GLOBAL GATWEWAY AIRPORTS SERVING N & S WALES



7.8 As a rule of thumb terrestrial journeys of less than two hours leave little room for air travel to play a role. Between two and three hours in certain circumstances (mainly business) air can have a role to play, whilst above three and particularly over four hours, air services can contribute significantly to the connectivity of a region.

7.9 The previous analysis leads to some simple geographic truths about what may be both required, and possible, in the four corners of Wales (see Figure 6) in terms of air services. This is reinforced when the potential importance of air connectivity is considered to and between these areas, and the Enterprise Zones located in them, as their economies change and their infrastructure is enhanced over time. Hence:

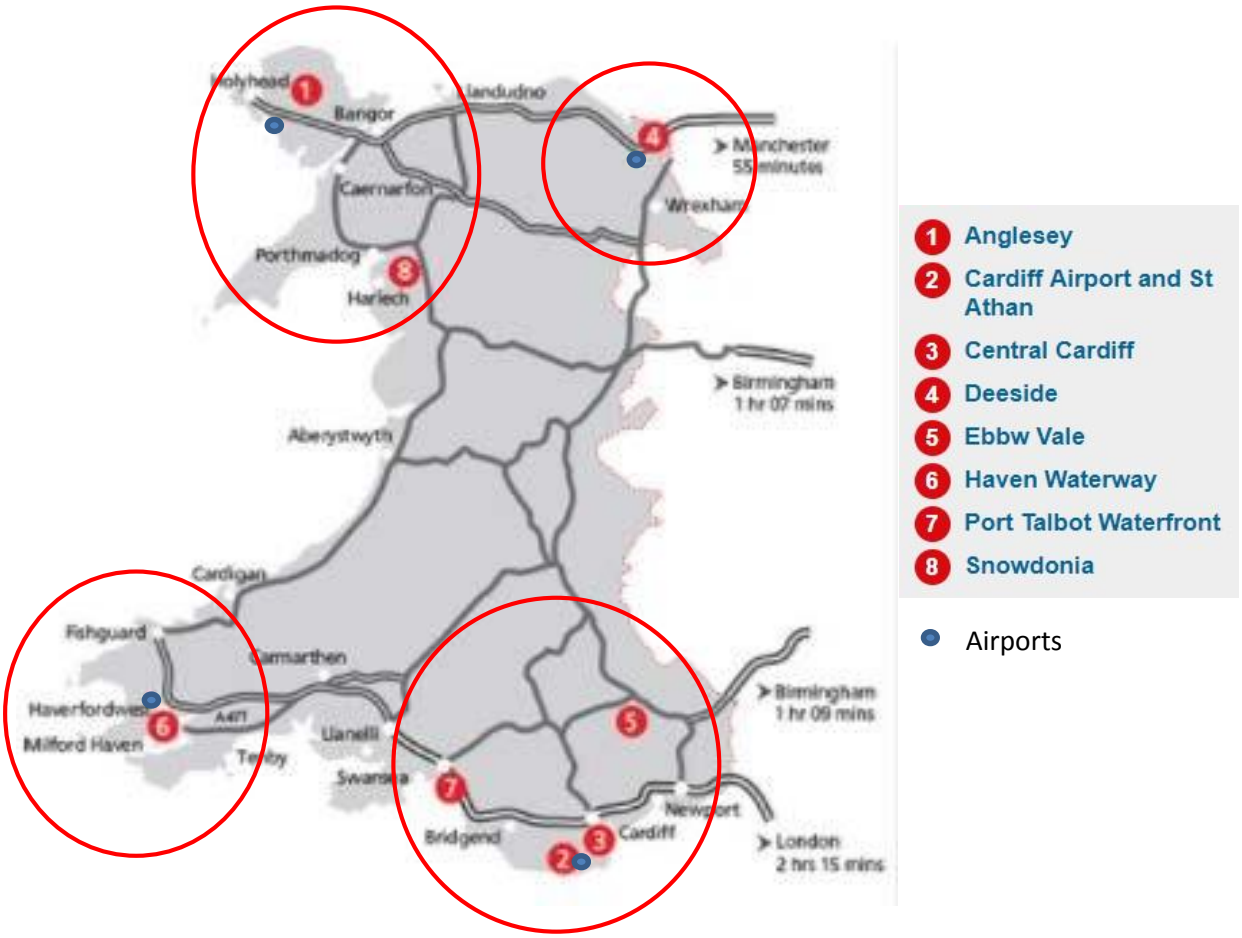
Cardiff Airport/St Athan - is now in public ownership and being targeted for aerospace/motor industry

Deeside Hawarden – is a high-tech employment cluster of UK significance

NW Wales – exciting projects – Nuclear Power – Energy Island – University – Holyhead waterfront renewal – World Class tourist offer

SW Wales – adjusting to contractions in oil refining – tourist destination

FIGURE 6: WELSH DEVELOPMENT ZONES AND RELATIONSHIP WITH WELSH AIRPORTS



7.10 This led us to focus our subsequent route level investigations on Hawarden and Haverfordwest (with Cardiff and Anglesey having been thoroughly investigated previously). The qualification to this was examining the potential utility of SET aircraft operating out of Cardiff to Valley. Then as in the PSO Extension study, we generated a significant number of route forecasts, subjected them to Apex analysis before considering them in terms of economic impacts and finally examined them through the lens of the WelTAG process. This analysis is summarised in the Tables that follow.

Market Analysis and Demand Forecasting

7.11 Our starting point was to take advantage of recently released 2015 CAA survey data to explore the existing travel patterns of air passengers lying within a 30-minute drive-time catchment of Hawarden Airfield and one 2-3 times as large for Haverfordwest, the difference being competition from Liverpool and Manchester at Hawarden, whereas Haverfordwest has little or none. We also recalibrated the Gravity Model used in the original 2003 route feasibility studies to estimate the number of passengers who currently make surface journeys; and from that, we derive a number of passengers that would potentially switch to air travel, as this is not picked-up in the CAA data (see Table 23).

TABLE 23: GRAVITY MODELLED AIR DEMAND BETWEEN VARIOUS RELEVANT AIRPORTS

	Cardiff – Haverfordwest	Cardiff - Hawarden	Hawarden - Haverfordwest	London - Hawarden
Base Market Potential	10,617	14,855	12,391	17,416
3x Daily Service	8,494	11,884	9,913	13,933
2x Daily Service	6,901	9,656	8,054	11,320

7.12 Then combining both, we generated Table 25, which is a high-level overview that sets out overall projected demand figures and integrates them with optimal frequency and aircraft type to identify routes that look likely to succeed. The red scoring indicates those that are most promising and the basis for reaching those conclusions is set out in Table 24 below.

TABLE 24

Route Evaluation	
Less 30%	Non-starter
30-40%	Very Poor
40-50%	Poor
50-60%	Modest
60-70%	Possible
70-80%	Promising
80-90%	Good
90-100%	Very Good
Greater 100%	Outstanding

TABLE 25: HIGH LEVEL MARKET APPRAISAL OF PSO REVIEW ROUTE OPTIONS

Service Routing	Assumptions	Catchment Leakage	Freq'y per week	Competition	Attractiv'ness over Alternatives	Assumed Market Penetr'ti'n	Existing Market Captured	Potential Stimulation	Estimated Total Demand	Seat Capacity	Projected Load Factor	Route Evaluation	Comments
Anglesey - 9 seater													
VLY - CWL	9-seater	11,000	10	Road/rail	High	70%	7,700	-10%	6,930	8,640	80.2%	Good	PTP traffic source PSO commercial data; higher seat costs than existing.
VLY - CWL	9-seater	11,000	15	Road/rail	High	80%	8,800	10%	9,680	12,960	74.7%	Promising	PTP traffic source PSO commercial data; higher seat cosst than existings
Hawarden													
CEG-CWL	9-seater	9,656	12	Road/rail	Moderate	60%	5,794	20%	6,952	10,800	64.4%	Possible	PTP traffic sourced from RCFM;
CEG-CWL	9-seater	11,884	17	Road/rail	Moderate	70%	8,319	20%	9,983	15,200	65.7%	Possible	PTP traffic sourced from RCFM;
CEG-CWL	19-seater	9,656	12	Road/rail	Moderate	65%	6,276	25%	7,846	22,800	34.4%	Very Poor	PTP traffic sourced from RCFM;
CEG-CWL	19-seater	11,884	17	Road/rail	Moderate	75%	8,913	25%	11,141	32,300	34.5%	Very Poor	PTP traffic sourced from RCFM;
CEG-LHR	31-seater	100000	12	Road/rail	Moderate	20%	20,000	15%	23,000	37,200	61.8%	Possible	Larger and quicker aircraft will be needed for access to Heathrow
CEG-LHR	31-seater	100,000	17	Road/rail	Moderate	30%	30,000	25%	37,500	52,700	71.2%	Promising	Larger and quicker aircraft will be needed for access to Heathrow
CEG-LHR	50-seater	100,000	12	Road/rail	Moderate	25%	25,000	20%	30,000	60,000	50.0%	Modest	Larger and quicker aircraft will be needed for access to Heathrow
CEG-LHR	50-seater	100,000	17	Road/rail	Moderate	35%	35,000	30%	45,500	85,000	53.5%	Modest	Larger and quicker aircraft will be needed for access to Heathrow
CEG-AMS	31-seater	142,000	12	Air LIV/MAN	Moderate	20%	28,400	10%	31,240	37,200	84.0%	Good	Good performance to alternative hubs - big connecting market
CEG-CDG	31-seater	80,000	12	Air MAN	Moderate	35%	28,000	15%	32,200	37,200	86.6%	Good	As above but less competition from LIV on Paris
CEG-IOM	9-seater	34,000	12	Air LIV/MAN	Low/Moderate	15%	5,100	20%	6,120	10,400	58.8%	Non-Starter	Probably not
CEG-INV	19-seater	9,280	6	Air MAN	High	60%	5,568	30%	7,238	11,400	63.5%	Possible	ostensibly good but risks
CEG-DUB	31-seater	117,000	12	Air LIV/MAN	Low	10%	11,700	15%	13,455	37,200	36.2%	Very Poor	ostensibly good but risks
CEG-BHD	19-seater	100,000	12	Air LIV/MAN	Low/Moderate	15%	15,000	15%	17,250	22,800	75.7%	Promising	ostensibly good but risks
Haverfordwest													
HAW-CWL	9-seater	10,620	12	road/rail	Moderate	60%	6,372	10%	7,009	10,800	64.9%	Possible	Market less strong than Angleseydue to shorter travel times on alt modes
HAW-CWL	9-seater	10,620	17	road/rail	Moderate	75%	7,965	10%	8,762	15,200	57.6%	Modest	Market less strong than Angleseydue to shorter travel times on alt modes
HAW-CWL-LHR	9-seater	72,500	17	road/rail	Moderate	20%	14,500	15%	16,675	15,200	109.7%	Outstanding	When can connect to LHR shuttle at CWL becomes outsanding
HAW-CWL-LHR	19-seater	72,500	6	road/rail	Moderate	15%	10,875	10%	11,963	11,400	104.9%	Outstanding	When can connect to LHR shuttle at CWL becomes outsanding
HAW-CEG	9-seater	12,390	12	road/rail	Moderate/High	65%	8,054	5%	8,456	10,800	78.3%	Promising	More than I frequency a day and attractive pricing could make this promising
HAW-CEG	9-seater	12,390	17	road/rail	Moderate/High	75%	9,293	15%	10,686	15,200	70.3%	Promising	More than I frequency a day and attractive pricing could make this promising
Triangulation between VLY and CEG													
VLY/CEG-CWL	19-seater	25,855	10	road/rail	Moderate/High	60%	15,513	5%	16,289	18,240	89.3%	Good	risks and sig. subsidy
VLY/CEG-CWL	19-seater	25,855	15	road/rail	Moderate/High	75%	19,391	5%	20,361	27,360	74.4%	Promising	risks and sig. subsidy
VLY/CEG-CWL	31-seater	25,855	10	road/rail	Moderate/High	60%	15,513	5%	16,289	29,760	54.7%	Modest	risks and sig. subsidy
VLY/CEG-CWL	31-seater	25,855	15	road/rail	Moderate/High	75%	19,391	5%	20,361	44,640	45.6%	Poor	risks and sig. subsidy
VLY/CEG-CWL	50-seater	25,855	10	road/rail	Moderate/High	65%	16,806	10%	18,486	48,000	38.5%	Very Poor	risks and sig. subsidy
VLY/CEG-LHR	31-seater	140,000	15	Air MAN/road/rail	Moderate	35%	49,000	20%	58,800	44,640	131.7%	Outstanding	very attractive
VLY/CEG-LHR	50-seater	140,000	10	Air MAN/road/rail	Moderate	25%	35,000	15%	40,250	48,000	83.9%	Good	very attractive
VLY/CEG-LHR	50-seater	140,000	15	Air MAN/road/rail	Moderate	40%	56,000	25%	70,000	72,000	97.2%	Very Good	very attractive

Commentary: This table (Table 25) was used to shortlist the PSO aircraft route enhancement options. The red scoring indicated those that justified exploring further. However, additional filters thinned this further. For instance, though the 9-seat solution looked promising in terms of load factors, the more detailed review of SET's undertaken separately rejected them on the basis of cost (and some other considerations). The links to Hubs all scored well. (**Note:** PTP stands for **Point to Point** and RCFM **Regional Connectivity Forecasting Model**)

APEX Commercial Appraisal

7.13 In order to provide a consistent and up to date platform for undertaking the kind of commercial modelling the study required, Northpoint secured access to RDC Aviation's APEX model, which allows multiple options and input variations to be examined relatively quickly, and produces outputs in a useful spreadsheet format. There were a number of limitations with using APEX to examine the kind of PSO and thin route services the study is focused on:

- the standard input menu in the model contains only a limited number of small aircraft – for example the Cessna Caravan is not represented and it was necessary to introduce new aircraft into the simulation: the pressurised Pilatus P12, as representative of the 9 seat category (although more expensive than the Caravan) and also the Dornier 228NG, which is an unpressurised 19 seater but has recently been brought back into production.
- not all potential destinations were accessible (e.g. Hawarden and Haverfordwest had to be introduced into the software as new airfields with some reasonable, but approximated, assumptions about their charges being made.)
- drop-in or tri-angulated services are not easy to appraise as the model works on a single sector at a time.

7.14 Nonetheless, APEX utilises up to date operating cost information from aircraft manufacturers and airports, and has the facility to specify fuel price and charging discount assumptions. It is also helpful for facilitating direct comparisons between carriers, aircraft types or nearby airport alternatives and allows the user either to use a simple 'breakeven' mode where very little by way of external inputs are required, or a more complex advanced function in which a range of input parameters can be used to refine and tailor model runs to local conditions or external user judgements. Northpoint has made significant use of the latter to generate the financial outputs that follow, using their indepth knowledge of individual markets, competition, airport pricing strategies and airline business models.

7.15 More details on the APEX outputs can be found in the main ***Technical Report into Long Term Future Options for Aviation PSOs in Wales (Table 1)***, but the key results are summarised in the Tables 26 – 30 below. These tables also contain a final column where Northpoint has adjusted the output profit and loss figures from APEX to generate an implied subsidy level based on the fares that realistically, might be expected. So, for example in Table 26 the SET aircraft study assumed the average fare would remain similar to the current fare of c£45 and hence subsidy projected was higher. In the ***Aircraft Considerations Report (Table 1)***, it assumed the P12 would cost an extra £20k subsidy per year for current service levels, and an extra £160k per year if 3 flights per day were operated.

Cardiff to Anglesey

TABLE 26(a): CARDIFF TO ANGLESEY PILATUS P12 ROUTE APPRAISAL

Route	Aircraft Size	Frequency	Route Profit and Loss	Implied Subsidy (+/- 15%)
CWL-VLY	8 (Pilatus P12)	10 (reduced capacity) assumed £80 av. fare	Loss of £225,000 on 80% load factor (6600 pax)	£650,000 (incl £350k VLY civilian enclave)
CWL-VLY	8 (Pilatus P12)	15 (current capacity) assumed £80 av. fare	Loss of £380,000 on 74.7% load factor (9320 pax)	£780,000 (incl £350k VLY civilian enclave)

7.16 Table 26a, is extracted from the separate SET study summarised above (referenced in Table 1). The aircraft can be operated in a one or two pilot configuration. The requisite subsidy will in our estimation not be so very different from the Let 410 subsidy but it will offer even with less capacity. Table 26b estimates subsidy per head over the last decade. It should also be noted that the subsidy estimate was based upon higher fares that currently achieved (£80 vis a vis an estimated £45 per sector). Indeed to reach breakeven average fares of £110 would be required on anticipated and reduced carryings. It is worth noting that current average fares are estimated to be in the £45 range, and should not be confused with the PSO stipulated £70-£90 maximum fare range.

TABLE 26(b): ESTIMATED SUBSIDY PER HEAD

Period	Pax Numbers	Annual Subsidy	Subsidy / pax
May07-Aprl08	14,133	£810,000	£57
May08-Aprl09	14,718	£710,000	£48
May09-Aprl10	8,894	£730,000	£82
Jun10-May11	9,240	£820,000	£89
Jun11-May12	9,663	£1,150,000	£119
Jun12-May13	8,307	£1,125,000	£135
Jun13-May14	8,526	£1,194,000	£140
Jun14-May15	10,046	£1,201,000	£120

7.17 Bearing in mind that the public purse would still have to accept the cost of the Anglesey Airport civilian enclave operation (at approximately £350k per annum) we can appreciate that for example 6,600 passengers (which was modelled) using the route with the P12 would be

requiring something of the order of £53 / head to contribute the civilian enclave aspect alone.

The public purse might be facing a subsidy of approximately £110 / head. Of course, because of the reduced capacity, there might be room to raise the fare on the route and thereby reduce this burden somewhat. However, the scope for fulfilling social inclusion aspirations and broadening the pool of beneficiaries for the service would be reduced and it might be susceptible to claims that it was a subsidised business class service.

7.18 Increasing the frequency as set out below will better respond to (or match) current demand, but with the average subsidy per passenger now rising to over £120 / head. (***PSO Review Technical Report*** for more detail) **Cardiff to Haverfordwest**

TABLE 27: CARDIFF TO HAVERFORDWEST

Route	Aircraft Size	Weekly Frequency	Route Profit and Loss	Implied Annual Subsidy (+/- 15%)
CWL-HAW	9 seats (Pilatus P12)	12/week assumed £80 av. fare. However, if £45 is more achievable then a higher subsidy will be required	Loss of between £285,000 to £510,000 (load factors 65% - 6,500 pax)	£350,000- £575,000 (Marketing and additional minor staff costs at HAW of £65k assumed)
CWL-HAW	18 seats (Dornier 228)	6/week assumed £100 av. fare. However, if £45 av. fare is more achievable then a higher subsidy will be required	Projected requiring no subsidy with only 1 flight per day, but expensive £100 av. fare, all of which would reduce attraction and hard to credit 7,600 pax carried (65% load factor).	Subsidy thereby approaching £200,000 with additional costs at HAW, but likely much more as market is constrained.
CWL-HAW	18 seats (Dornier 228)	12/week assumed £100 av. fare. However, if £45 is more achievable then a higher subsidy will be required	Scenarios range between profit of £358,000 to loss of £180,000 projected on load factors of 65%, which is above demand estimates.	No subsidy to £200,000 subsidy. (Marketing and additional staff costs at HAW of £65k assumed), but likely much more
CWL-HAW	31 seats (Dornier 328)	12/week assumed £100 av. fare. However, if £45 av. fare is more achievable then a higher subsidy will be required	Profit of £982,000 possible on an unlikely 80% load factor and 32,000 carryings.	If 65% load factor and £45 av. fare assumed, then subsidy of £1.45 million is projected. (Marketing and additional staff costs at HAW of £65k assumed.) NASP and extra staffing would also be required (un-costed)

7.19 Turning to Haverfordwest, a 12-rotations per week service requires a fare of over £120 to breakeven unless load factors are particularly high (such as a difficult to achieve 90% load factor), when average fare may fall to more like £100.

7.20 APEX was then used to explore the route economics of an un-pressurised 19 seat Dornier 228 and a pressurised 31 seat Dornier 328. Even with very large passenger patronage (above what market demand indicates from our other enquiries) or high load factors (again hard to envisage) the services could not be made to breakeven on £100 average fares.

Hawarden to Heathrow, Amsterdam and Paris

7.21 In this section, the high-level economics of running various aircraft to major hubs such as Heathrow and Amsterdam are considered. (***PSO Review Technical Report*** for more detail)

TABLE 28: HAWARDEN (CEG) TO HEATHROW (LHR), AMSTERDAM (AMS) AND PARIS (CDG)

Route	Aircraft Size (Capacity)	Weekly Frequency	Route Profit and Loss	Implied Annual Subsidy (+/- 15%)
CEG-LHR	**Dornier 328100 (31)**	12	754,000 loss (assumes high-ish £150 average fare so could be more) 65% load factor	£800,000 subsidy plus NASP capital cost
CEG-LHR	**Dornier 328100 (31)**	17	Approaches breakeven at £175 average fare. 65% load factor	Suggests modest / no subsidy plus NASP capital cost
CEG-AMS	**Dornier 328100 (31)**	12	£350,000 profit on £140 av. Fare. and 65% load factor	No subsidy but NASP capital cost
CEG-AMS	**Dornier 328100 (31)**	17	Similar profit on £120 av. Fare and 75%. Load factor	No subsidy but NASP capital cost
CEG-CDG	**Dornier 328100 (31)**	12	Breakeven at 70% load factor and £120 fare	No subsidy but NASP capital cost

7.22 Turning our attention to Heathrow we can appreciate that a Dornier 328 can exceed breakeven with 65% load factor with three flights per day, although with a rather expensive average yield (£175). Two flights per day does not really work on comparable load factors.

7.23 Table 28 establishes that if average load factors are higher, then profitability is achievable, without the fares being too high. However, load factors of say 85% are very hard to envisage and achieve, and it is possible that a service to LHR may require subsidy.

7.24 The prospect of commercially profitable operations at Amsterdam looks strong across all options and at lower fares. This is no doubt partially due to airport charges being lower. However,

it should be remembered that Heathrow is offering discounted packages to UK regions and this might be become material to the economics of routes such as this, and certainly charges at Northolt would be competitive if access were permitted.

7.25 A Dornier 328 to CDG (Charles de Gaulle) looks promising across a range of price points, but requires a strong load factor.

Hawarden to Haverfordwest

TABLE 29: HAWARDEN TO HAVERFORDWEST, AND HAWARDEN TO BELFAST CITY

Route	Aircraft Size (Capacity)	Weekly Frequency	Route Profit and Loss	Implied Subsidy (+/- 15%)
CEG-HAW	Pilatus P12 (8)	12	£385,000 loss on £75 av. fare and 78.3% load factor	£500,000 (Marketing and additional minor staff costs at HAW of £65k assumed)
CEG-HAW	Pilatus P12 (8)	17	£500,000 loss on av. £80 fare and 70.3% load factor	£565,000 (Marketing and additional minor staff costs at HAW of £65k assumed)
CEG-BHD	Dornier 228 (19)	12	£200,000 loss on av. £80 fare and high load factor of 70%	£265,000 (Marketing and additional minor staff costs at HAW of £65k assumed)
CEG-BHD	Dornier 328-100 (32)	12	£900,000 profit on 70% load factor and 27,000 pax demand	Possibly self funding

7.26 In the case of a service between Haverfordwest and Hawarden, it is hard to envisage profitability on a 9-seater aircraft at likely price points and hence it looks like a PSO subsidy would be required. Increasing the frequency only compounds the challenge.

7.27 A 19 seat Dornier 228 can potentially be made to work on a flight to Belfast City with good load factors and the Dornier 328 also works at a similar load factor.

Triangular Routes Linking Cardiff to Hawarden and Anglesey

TABLE 30: TRIANGULAR ROUTES LINKING CARDIFF TO HAWARDEN AND ANGLESEY

Route	Aircraft Size (capacity)	Weekly Frequency	Route Profit and Loss	Implied Subsidy (+/- 15%)
CWL-HAW-VLY	Dornier 228 (19)	12	Loss of £2.9m on 75% and 60% load factor (LF) on diff. legs (£50 & £25 av. fares) £125 return	£3m loss likely

CWL-CEG-VLY	Dornier 228 (19)	12	Loss of £3.4m on low fare regime and 75% and 60% LF on diff. legs (£65 & £45 av. fares) £175 return	£3.5m loss likely
CWL-CEG-VLY	Dornier 228 (19)	12	Loss of £125k on higher fare regime and 75% and 60% LF on diff. legs (£80 & £45 av. fares) £205 return	£125k loss likely on higher fare regime
VLY-CEGLHR	Dornier 328-100 (32)	12	£3.2m loss predicted. Fare regime on high 80% and 60% LF and £100 & £50 av. fares £250 return	£3.2m loss likely plus £350k civilian enclave at CEG and NASP costs at both
VLY-CEGLHR	Saab 2000 (50)	12	£152k loss predicted. Fare regime on 75% and 60% LF and £90 & £60 av. fares £240 return	£152,000 loss likely plus £350k civilian enclave at CEG and NASP costs at both

7.28 In Table 30 we look at a possible 'triangulation'. There are several attractions to triangulation that can be balanced against its downsides for passengers requiring slightly longer journey time than otherwise (with an interim stop). The first three simulations are with a 19 seat Dornier 228 and explore losses at varying fares. The final options are a 32 seat Dornier 328 and 50 seat Saab2000 flying into Heathrow.

7.29 Note the combined fares highlighted (e.g. CEG-LHR x 2 Plus 1 VLY-CEG) will in effect be a return fare, assuming the routing is true triangle[21]. In these simulations the VLY-CEG leg has been priced lower than the other 'more desirable' leg, and it is assumed that each passenger will pay a return on the desirable leg and one single on the VLY-CEG leg. It has also been assumed that load factors on the VLY-CEG leg will be lower, as this is not really point to point demand, but largely through travel demand. Hence the return fare is twice the high fare leg and once the lower fare leg.

7.30 If a higher fare regime is used on CWL-CEG-VLY losses are reduced considerably, albeit at high assumed load factors, which because of the demand sharing identified, might be expected.

7.31 The advantages of triangulation are:

- Creating viability, where otherwise it would not exist;
- Justifying a larger aircraft than might otherwise be the case;

[21] There can be different permutations to such a routing eg VLY-CEG-LHR and then LHR-VLY-CEG or VLY-CEG-LHR and then LHR-CEG-VLY. We have assumed the former which is referred to as a true triangle.

- Creating new itinerary options with split journeys for instance at each location; ▪

  Sharing the benefits of public support more widely;

- And finally, as we will consider later, taking better advantage of scarce slots at a congested hub.

7.32 Until recently, Air South West used to successfully operate this kind of service from Plymouth and Newquay into London Gatwick. It was self-sustaining and profitable throughout the 1990's and 2000's, until Air South West were challenged on the route by Flybe.

7.33 However there have also been other examples such as:

- Inverness – Dundee – London;
- Faroes – Shetland – London;
- Inverness – Kirkwall – Sumburgh; and
- A PSO route between Benbecula – Stornoway (as a PSO), shared with Stornoway – Inverness as a non PSO service, with passengers remaining on the aircraft.

7.34 Because APEX is not able to automate this process, the individual outputs for each leg need to be combined to produce a final result. Hence the three legs are illustrated and then combined in a final read summary. It will be noted that lower carryings and load factors are anticipated on the weaker leg.

7.35 Looking at the triangulation from North Wales into Heathrow, a picture emerges whereby the larger aircraft (Saab 2000) approaches breakeven. Heathrow is offering discounted packages to UK regions and this might become material to the economics of routes such as this – we estimate in the range of £10 / pax, which in these examples, would represent a £319,130 reduction in deficit on the Dornier and £584,900 contribution on the Saab bringing the operation into surplus.

7.36 The outcome of the APEX work was a slightly shorter list of route options that were then subjected to the same kind of indicative economic impact assessment and WelTAG appraisal as described for the enhancement and extension options in Chapter 3. The latter comprised considering a series of transport objectives, high-level WelTAG criteria, and finally Welsh Government Economic and Transport Policy Directives. The results are set out in Tables 31-34.

TABLE 31: ECONOMIC IMPACT APPRAISAL

Service Routing	Seat Capacity of Aircraft	Frequency per Week (Rtn Trip)	Estimated Total Demand	Estimate of Generated Traffic (think I did this wrong)	Projected Load Factor	Route Commercial Evaluation	Estimated Direct Jobs	Indirect + Induced Jobs	Total Jobs Created	% Business Pax	Travel Cost Saving per Business Pax (£)	Time Savings per Pax (hrs)	Cost Saving pa - Air vs Road (£)	User Benefits (£)	GVA (£/m)
VLY - CWL	9-seater	10	6,930	-770	80.0%	Good	8	12	20	62%	80	2.5	362,824	623,604	0.986
VLY - CWL	9-seater	15	9,680	880	75.0%	Promising	12	17	29	62%	80	2.5	458,304	787,710	1.246
CEG-LHR	31-seater	17	37,500	7,500	71.0%	Promising	45	66	111	60%	140	2.0	2,835,000	2,227,500	5.063
CEG-AMS	31-seater	12	31,240	2,840	84.0%	Good	37	55	92	50%	20	2.0	298,200	1,640,100	1.938
CEG-CDG	31-seater	12	32,200	4,200	87.0%	Good	39	56	95	50%	20	2.0	301,000	1,655,500	1.957
CEG-BHD	19-seater	12	17,250	2,250	76.0%	Promising	21	30	51	60%	120	2.0	1,161,000	1,064,250	2.225
HAW-CWL-LHR	9-seater	17	16,675	2,175	110.0%	Outstanding	20	29	49	60%	210	4.0	1,964,025	2,057,550	4.022
HAW-CWL-LHR	19-seater	6	11,963	1,088	105.0%	Outstanding	14	21	35	60%	115	4.0	787,877	1,507,242	2.295
HAW-CEG	9-seater	12	8,456	403	78.0%	Promising	10	15	25	50%	95	3.0	392,097	681,011	1.073
HAW-CEG	9-seater	17	10,686	1,394	70.0%	Promising	13	19	32	50%	30	3.0	149,841	824,123	0.974
VLY/CEG-CWL	19-seater	10	16,829	776	89.0%	Good	20	29	50	62%	50	2.0	509,671	1,121,276	1.631
VLY/CEG-CWL	19-seater	15	20,361	970	74.0%	Promising	24	36	60	62%	50	2.0	616,156	1,355,543	1.972
VLY/CEG-LHR	31-seater	15	58,800	9,800	132.0%	Outstanding	71	103	174	50%	110	3.0	2,964,500	4,446,750	7.411
VLY/CEG-LHR	50-seater	10	40,250	5,250	84.0%	Good	48	71	119	50%	110	3.0	2,069,375	3,104,063	5.173
VLY/CEG-LHR	50-seater	15	70,000	14,000	97.0%	Very Good	84	123	207	50%	130	3.0	4,095,000	5,197,500	9.293
Note: APEX runs were often for 12 rather than 10 or 15 so hard to interpolate.															

Commentary: Links into hubs deliver large GVA benefits. Larger aircraft, if they can be justified by demand, and if triangulations are entertained, also perform well.

TABLE 32: APPRAISAL AGAINST COMMERCIAL AND OPERATIONAL CONSIDERARTIONS

Appraisal Against Commercial and Operational Considerations							
Route Option	Size	Per week	Minimise nos of late running flights	Delivers a good day's work at either end of the route	Contributes to the economic development of the catchments	Enhance external connectivity (direct & onward)	Maximise benefit of aircraft
VLY-CWL	9-seater	10	/	+ +	+	+	/
VLY-CWL	9-seater	15	/	+ +	+	+ +	+ +
CEG-LHR	31-seater	17	/	+ + +	+ + +	+ + +	+ + +
CEG-AMS	31-seater	12	/	+ +	+ + +	+ + +	+ +
CEG-CDG	31-seater	12	/	+ +	+ + +	+ + +	+ +
CEG-BHD	19-seater	12	/	+ +	+	+	+ +
HAW-CWL-LHR	9-seater	17	-	+ + +	+ + +	+ + +	+ + +
HAW-CWL-LHR	19-seater	6	-	/	+	+ +	-
HAW-CEG	9-seater	12	/	+ +	+	+	+ +
HAW-CEG	9-seater	17	/	+ +	+	+ +	+ +
VLY/CEG-CWL	19-seater	10	/	+ +	+ +	+	+
VLY/CEG-CWL	19-seater	15	-	+ + +	+ +	+	+ + +
VLY/CEG-LHR	31-seater	15	-	+ + +	+ + +	+ + +	+ + +
VLY/CEG-LHR	50-seater	10	/	+ +	+ + +	+ + +	+ +
VLY/CEG-LHR	50-seater	15	-	+ + +	+ + +	+ + +	+ + +

Appraisal Scoring	
+ + +	Large Beneficial
+ +	Moderate Beneficial
+	Slight Beneficial
/	Neutral
-	Slight Adverse
- -	Moderate Adverse
- - -	Large Adverse

Commentary: This table provides some three star read-acrosses such as large 31 or 50 seat aircraft delivering a frequent point to point or triangulated service into LHR. A 9-seater also scores well, although this aircraft would be very unlikely to secure a slot at LHR, and so would be rejected on this (and other grounds).

TABLE 33: APPRAISAL AGAINST ESTABLISHED ECONOMIC, SOCIAL AND ENVIRONMENAL DIRECTIVES

Appraisal Against Established Policy Directives					
Route Option	Size	Per week	Economy	Environment	Social
VLY-CWL	9-seater	10	+	-	+
VLY-CWL	9-seater	15	+ +	-	+ +
CEG-LHR	31-seater	17	+ + +	/	+ + +
CEG-AMS	31-seater	12	+ + +	/	+ +
CEG-CDG	31-seater	12	+ + +	/	+ +
CEG-BHD	19-seater	12	+ +	/	+ +
HAW-CWL-LHR	9-seater	17	+ +	-	+ +
HAW-CWL-LHR	19-seater	6	+ +	/	+ +
HAW-CEG	9-seater	12	+	+	+
HAW-CEG	9-seater	17	+	+	+
VLY/CEG-CWL	19-seater	10	+	+	+ +
VLY/CEG-CWL	19-seater	15	+	+	+ +
VLY/CEG-LHR	31-seater	15	+ + +	/	+ +
VLY/CEG-LHR	50-seater	10	+ + +	/	+ + +
VLY/CEG-LHR	50-seater	15	+ + +	/	+ + +

Commentary: This table provides some strong read-acrosses such as large 31 or 50 seat aircraft delivering a frequent point to point or triangulated service into LHR. However, the larger aircraft scores more neutrally on environmental grounds which must balance the greater emissions against the avoidance of long terrestrial access journeys (usually by car the evidence suggests) to a very congested part of the UK at LHR.

TABLE 34: APPRAISAL AGAINST A SERIES OF ECONOMIC AND TRANSPORT OBJECTIVES THAT THE STUDY TEAM DEVELOPED

Appraisal Against Established Policy			Economic					Transport				
Route Option	Size	Per week	Investing in quality/ sustainable infrastructure (airports, air	Making Wales a more attractive place to do business (+ inward investment)	Broadening and deepening the skills base	Encouraging innovation	Targeted business support (Priority Sectors, SMEs and Enterprise Zones)	Reduce environmental impacts (reduce large car fed	Integrate Transport	Improve access between key sites	Enhance International Connectivity	Increase safety and security
VLY-CWL	9-seater	10	+	+	+	+	++	+	+	+	+	+
VLY-CWL	9-seater	15	++	++	+	+	++	+	+	+	+	+
CEG-LHR	31-seater	17	+++	+++	++	++	+++	+	++	+++	+++	+
CEG-AMS	31-seater	12	++	+++	++	++	++	+	++	++	+++	+
CEG-CDG	31-seater	12	++	+++	++	++	++	+	++	++	+++	+
CEG-BHD	19-seater	12	+	+	+	+	+	+	+	+	+	/
HAW-CWL-LHR	9-seater	17	+++	+++	++	++	+++	+	++	+++	+++	+
HAW-CWL-LHR	19-seater	6	++	++	+	+	++	+	+	++	++	+
HAW-CEG	9-seater	12	/	/	+	+	/	/	+	+	+	/
HAW-CEG	9-seater	17	/	/	+	+	/	/	+	+	+	/
VLY/CEG-CWL	19-seater	10	++	+	+	+	+	/	+	++	/	/
VLY/CEG-CWL	19-seater	15	++	++	++	++	++	/	++	+	/	/
VLY/CEG-LHR	31-seater	15	+++	+++	++	++	+++	+	++	+++	+++	+
VLY/CEG-LHR	50-seater	10	+++	+++	++	++	+++	+	++	+++	+++	+
VLY/CEG-LHR	50-seater	15	+++	+++	++	++	+++	+	++	+++	+++	+

Commentary: This attempt at a balanced and multi-faceted evaluation highlights the attractiveness of hubs and higher frequencies and capacities yet again. The triangulation options potentially justify larger aircraft on the route than if the routes were solely point to point.

PSO Regulations

7.37 With regard to the relevance of the EU PSO Regulations

- The only potential internal Welsh route that may have difficulty in justifying a PSO is Hawarden – Cardiff. Care would need to be taken to justify how this link is 'vital'.
- Haverfordwest – Cardiff would be hard to justify as standalone, but if linked with a LHR shuttle, it should be justifiable.
- Haverfordwest – Hawarden should be justifiable.
- Routes into LHR should be able to be designed as PSOs once LHR has additional capacity – this should be resisted in the interim on pragmatic grounds – (no slots).
- There are niceties to observe regarding 'bundling' and 'grouping' of routes that are aired in the report narrative, and would need to be addressed with care.

Conclusions

7.38 In essence, this piece of work brings Hawarden into sharper focus for both intra Wales and possible other air services. It also permitted the study to take a more limited view on the possible role of other Welsh Regional Airports and these are reflected in the recommendations.

7.39 Overall, the appraisal tables point to the considerable benefits associated with developing links to hubs (Heathrow in particular). The attractions of triangulated or feeder flights are also apparent.

FIGURE 1: ILLUSTRATIVE AIR SERVICE DEPLOYMENT INTO EXPANDED HEATHROW

7.40 A key decision for the Welsh Government when considering the option appraisal, is whether in the light of this they want to focus on optimising use of a smaller 9 or 19 seat aircraft, or develop new routes and whether to support the additional cost of introducing +19 seat aircraft

(including NASP implications), to expand the range of options that are possible, including international hubs as well domestic services, routes from Cardiff as well as Anglesey/Hawarden. On the assumption that this latter route share would be required to make it acceptable for Government and Heathrow to make available slots for such a North Wales air service.

7.41 Cardiff's larger market will offer reduced risk in route innovation and potentially bigger paybacks for Wales Plc in absolute terms.

8 STRATEGIC POLICY SCENARIOS

8.1 The portfolio of reports has made a range of more detailed recommendations for consideration. This section distils the detail into a set of options dependent upon strategic priorities.

The Policy Scenarios

8.2 Twelve Policy Options were summarised and subjected to a multi-faceted assessment.

i. Base Case/Do Nothing: The PSO continues as now, no interventions; only background market growth assumed.

ii. Terminate Cardiff Anglesey PSO: The Welsh Government shuts down the PSO altogether, saves £1.5m per annum, and relies on train travel, but writes down investment costs and loss of economic benefits (negative Net Present Value (NPV) as a result of slower journey times). N.B. It should be highlighted that extra costs will be required to restore market confidence if the service is stopped in the meantime and then re-started in future. The Welsh Government should only terminate the service if it is 100% certain it does not want to operate it now, or in future.

iii. Adopt SET Solution for CWL-VLY: An option would be to retreat to a 9-seater and potentially save a maximum of £300k per annum, but reduce the passenger market further and increase the subsidy per passenger.

iv. Replace CWL-VLY with SET at CEG-CWL: The total market may well be bigger, and it would link two important aerospace clusters. North West Wales would need to access the service by car. This option would save on subsidy as it may only need a 9 seater aircraft with slightly shorter sector lengths.

v. Triangulate Anglesey & Hawarden to Cardiff route: This is an option using an existing 19 seat aircraft to avoid NASP (cost £750k), but has the result of increasing load factors vs Base Case. Motivated by a need to reduce the subsidy and increase the connectivity offered by the PSO. The previous shared Plymouth – Newquay – London service provides a precedent; of which there are also others.

vi. Optimisation of Existing service: This option resolves to hold steady with the current solution (19 seat) but with a re-invigorated route development and marketing campaign. Various aspects include initiatives such as a £100k marketing fund; optimisation of timings for CWL onward connections; through ticketing onto buses at either end and fast track at CWL for ticket holders for a trial period.

vii. Incremental enhancement of existing VLY service: This option includes making progress in line with ***Route Enhancement Study*** recommendations moving towards (a) 31 seat aircraft with two rotations daily or (b) two times daily rotations with a 19 seater and a middle of the day 9 seat rotation.

viii. Introduction Midday Commercial Routes to Complement the PSO from VLY: In addition to vii, this option also envisages (a) midday new routes out of Cardiff with the PSO

aircraft to other destinations (detailed in the ***Thin Route Study*** + £725k VLY NASP) or (b) midday routes VLY to BHD or AMS (an estimated £110k+ route loss for BHD and approaching breakeven at AMS). However hangarage and NASP would also likely be required at VLY (c. £700k & £700k respectively).

ix. Incremental enhancement of VLY and add independent services from CEG: Under this option incremental enhancements at VLY would be sought. These might be initially an addition of a 9 seat aircraft to augment the morning and evening services with a midday service (e.g. VLY – CWL 2 x 19 + 1 x 9 seat); or an Anglesey departing midday rotation each workday with a 19 seat aircraft to another non-London destination; or incorporating Hawarden (VLY- CEG – CWL) using 3 rotations with a 9 seat aircraft.

x. Three Airport strategy: Build upon the current arrangements (ix. above) but introduce a 9 seater three times daily from HAW to CWL.

xi. Hub connections Strategy: This option would be as x. (above) but with (a) 31-seat aircraft triangulated via VLY + CGE services 2 x daily to LHR and 1x daily to AMS or (b) 50 seat aircraft doing the same; plus feeder flights to Cardiff with 9-seater from HAW timed to connect with a CWL - London shuttle. This would require a CWL – LHR PSO and a VLY-CEG-LHR PSO. Requirements would likely include a NASP upgrade in North (and a £3m NASP and new Terminal investment in CEG as detailed in the ***PSO Review Technical Report***) and likely subsidy on North Wales flights and a HAW-CWL PSO. There is the possibility of some private sector joint funding at Hawarden.

xii. Full Network Strategy: This option is as xi. (above) but with a 19 seat aircraft used for the PSO, and serving an additional service from Anglesey e.g. to Inverness (INV). This could eventually result in 4 rotations each day with the 19 seater with an additional rotation triangulating to Belfast (BHD). The 31-seater would be used to triangulate on LHR with double drop for AMS, or also used to double drop to CDG (these enhancements could be free market or require Route Development Fund support only) from CEG. This would require NASP at both northern Airports. There are many possible permutations.

Applying Different Weights based on Strategic Policy Aims

8.3 Each scenario was then considered against a range of WelTAG appraisal. A synthesis of this analysis, which is set out at greater length in the ***Technical Report into Long Term Future Options for Aviation PSOs in Wales*** is provided in Table 35. We sought to use the following strategic policy aims to guide decision-making by identifying which scenarios performed best under each.

- Minimising Public Outlay
- Maximising Connectivity and Accessibility
- Maximising Economic Benefit for Wales PLC
- Sustainable and Environmental objectives
- Regional / National Integration

- Integrated Strategic Approach

8.4 The results are summarised in the remainder of this Chapter which follows Table 35.

TABLE 35: APPRAISAL OF SELECTED STRATEGIC SCENARIOS AGAINST A RANGE OF CONSIDERATIONS

No	Strategic Scenarios	Changes to the connectivity, frequency and travel times allowed	Direct cost of travel/Value of time per pax	Impact on cost of operation at Anglesey Airport & its future use	Potential Cost to the public purse	Impact on jobs, GVA and the relevant Local economies	Effect on Energy Island proposal + plans to develop infrastructure in North Wales	Effect on the Welsh economy as a whole	Risk	State Aid mechanisms	Nation Building and National Integration	Symbolism of such a move	Environmental	Social and Tourism
1	Base Case/Do Nothing	/	/	/	/	/	/	/	/	PSO	/	/	/	/
2	Terminate Cardiff Anglesey PSO	---	--	+++	+++	-	--	-	-	n/a	--	---	/	/
3	Adopt SET Solution for CWL-VLY	/	-	-	+	-	-	-	-	PSO	-	--	/	/
4	Replace CWL-VLY with SET at HAW-CWL	-	--	+++	/	-	-	-	-	PSO?	--	--	/	/
5	Triangulate Anglesey & Hawarden to Cardiff route	++	+	/	-	+	/	+	-	PSO	+	++	/	+
6	Optimisation of Existing Service	++	+	+	--	++	+	+	-	PSO	+	++	/	+
7	Incremental Enhancement of existing VLY Service	++	++	++	--	++	+	+	-	PSO	++	++	/	+
8	Introduction Midday Routes to Complement the PSO from VLY	++	++	++	--	++	++	++	-	PSO/RDF	++	+++	/	++
9	Incremental Enhancement of VLY and Add Independent Services from Hawarden	+++	++	+++	---	++	+	+	--	PSO	+++	++	/	+
10	Three Airport Strategy	++	++	++	--	++	+	+	--	PSO?	+++	++	/	+
11	Hub connections Strategy	+++	+++	+++	---	+++	+++	+++	--	PSO/RDF	+	+++	-	+++
12	Full Network Strategy	+++	+++	+++	---	+++	+++	+++	--	PSO/RDF	+	+++	-	+++

Commentary: These 12 strategic scenarios endeavour to highlight the most attractive options and the likely support mechanism that will facilitate. Inevitably the most attractive options are more costly to the public purse. Incremental enhancements also score well in balancing risk against cost.

Minimising Public Financial Outlay

8.5 If this is the overriding criterion, then two possibilities present themselves.

Cease the Service

- This will save approx. £1.5m with loss of approx. 27 jobs and loss of £1.4 GVA
- However, it will cause regional disquiet. It would be prudent to prepare for some blowback, and it might be prudent to offer the area compensatory initiatives to mollify the region. These of course would likely not be cost free.

Put a 9-seater on route

- This could save approx. £300k pa but will reduce formal capacity to 8,820 and realistic capacity to about 80% of that (7,000).
- However, it will likely have the presentational disadvantage of increased subsidy per pax.
- This option is unlikely to be operationally available for a couple of years.

Maximising Connectivity and Accessibility

8.6 If the long-term focus is to improve connectivity and accessibility then the following are attractive, especially in light of Brexit strategizing.

Intra – Wales Connectivity – grow PSO route to justify +29 seat aircraft (using enhanced marketing focus) – it may take two (2x 4 year) PSO cycles to achieve. This aircraft may then play a role in some of the following. If access to LHR is possible, consider VLYCEG-LHR triangulation and feeder flights to CWL from HAW. In 5 years, review if HAWCEG can be justified/incorporated.

Wales – Rest of UK (RUK) and Ireland Connectivity – use various state support mechanisms to enrich links to London, Scotland, Belfast, S. Ireland, and Crown Dependencies.

Rest of Europe Connectivity – use various state support mechanisms to enrich links to FRA or CDG from CWL.

Long Haul Connectivity – strengthen CWL links with AMS, CDG and FRA and/or support N. Wales links with some of these.

Maximising Economic Benefit for Wales PLC

8.7 This concern suggests the following key objectives guide to decision making:

- The link with LHR is the standout most beneficial achievement; link with other London airport(s) is valuable (e.g. LCY).
- Links with FRA and enhanced links with CDG deliver good benefits.
- Links with RUK and enhanced links with S Ireland are less impressive in terms of economic benefit but easier to achieve and still worth striving for.
- Anglesey centric and Hawarden centric initiatives have been featured below. **Sustainable and Environmental objectives**

8.8 Because of the current lack of a comprehensive portfolio of Welsh air services, there are very high catchment leakage rates from Wales to English Airports.

8.9 Leakage is mostly undertaken by car, although rail is significant on N Wales to Cardiff City, Manchester City and Central London, and Cardiff to Central London; and improvements on these lines will underpin this. However, public transport percentages to Manchester, Bristol, Birmingham and Heathrow Airports are all very low. Reducing the use of the car should somewhat offset the additional emissions from additional flights or larger aircraft.

8.10 To be Politically and Financially Sustainable, the North Wales PSO urgently needs to increase patronage and utility to forestall criticism.

8.11 Additional tangible benefits such as a link with LHR will gain widespread support in both North and South Wales, especially as public subsidy should be low or not required. **Facilitating Regional / National Integration**

8.12 If the overriding objective is to stimulate the Welsh regions, then: NW Wales

- Increase size of aircraft on PSO and stimulate demand through better resourced marketing and selection of suitable carrier with superior GDS and inter-lining and increase opening hours at Anglesey (by only about 1 hour in evening). Underwrite NASP upgrade.
- Base aircraft in Anglesey and seek Anglesey originating destinations in line with report – NHT/LHR; Scotland; IOM, Belfast.
- NE Wales
- If access to LHR is secured triangulate flight with Anglesey; underwrite/facilitate NASP and other upgrades.
- Support other route development opportunities out of Hawarden on back of these investments; Scotland, Ireland and near Europe.
- Consider triangulated VLY-CEG-CWL service, which may help justify larger aircraft.

SW Wales

- If CWL secures slots at LHR then consider sub-NASP 9 seat feeder flight from HAW. Once established consider HAW – CEG. None of this is an immediate prospect. **Integrated Strategic Approach**

8.13 Secure existing PSO with better resourced marketing, explore CWL involvement in running VLY civilian enclave, lengthen VLY opening hours, and if operator emerges with +29 seat aircraft and persuasive proposition underwrite NASP upgrade (thereby consider longer lead in time for start of enhanced service to permit upgrade). Reward GDS visibility and code-sharing, and additional midday intention to use aircraft in tender Evaluation Criteria.

8.14 Consider option in tender to include VLY-CEG-CWL triangulation and accept bids using 19 seat and +29 seat aircraft. Leave option open for 9 seater submissions in tender, although operators may not be ready for this in short term. If persuasive +29 seat submission received, consider underwriting NASP upgrade at HAW. Liaise with AGP and Airbus on these possibilities before issuing tenders.

8.15 In Parallel seek slots with LHR and if secured for CWL, consider CWL-LHR PSO and HAW-CWL feeder PSO.

8.16 If LHR slots for aircraft in N Wales are secured, institute NASP upgrades and tender for triangulated PSO (there are some tendering niceties that may need to be observed to attain this result).

8.17 In medium term, and if some/all of this comes to pass, consider additional uses for 9seater within Wales such as HAW-CEG and to nearby destinations such as HAW-DUB or VLY-IOM.

9 POSSIBLE ORGANISATIONAL INNOVATIONS IN WELSH AVIATION

9.1 One final area we were asked to consider over the course of the Review was whether there were any Innovative Stewardship Models that the Welsh Government ought to be considering. The Aircraft Considerations report listed several possibilities, and possible airport options are discussed in the main PSO Review Technical Report. The options include:

- Public Ownership of Aircraft
- Joint Ventures: Public Sector Bodies Forming Joint Ventures with the Private Sector
- Private Finance Initiative
- Trust Model and Not for Profit Organisations
- Third Sector Organisations

9.2 The possible adoption of SETs for one or more thin PSO routes, and the need to ensure the right aircraft type is available to fly to Cardiff and London Heathrow from North and West Wales offers the opportunity for feeder flights from peripheral Wales, at the very least highlights the need for the Welsh Government to consider its options for how the aircraft required are procured and indeed owned. If there is a significant political commitment to enhancing the network of internal air services and connections to a UK national hub at Heathrow, then as a minimum the acquisition of relevant aircraft types by the Welsh Government (whether purchased or leased), as in the case of Transport Scotland, might help to guarantee key routes are served as required. And if the Aurigny model is adopted,

it would also help to ensure that any associated value (e.g. from grandfather rights of Heathrow slots) are internalised rather than being created for a private operator.

9.3 By countering some of the market reluctance to acquire new aircraft, especially where the required type is relatively specialised, PSO contenders would then be able to bid to operate and maintain the aircraft type rather than also supply it. Such an approach does offer the potential for the maximum number of potential bidders for a PSO to emerge. However for this to occur it is also necessary to allow bidders sufficient operational start up time to add the type to their AOCs. This can be a challenge for PSO renewals where the provided assets may not be available to allow AOC set-up activities to occur in parallel with ongoing operations by the incumbent. However, this approach may be less suitable where the aircraft required is a more common type than that which may be offered by the market.

9.4 Our analysis shows that the Dornier 228NG and its bigger elder brother the pressurised D328 turbo-prop could both be suitable to serve a Welsh PSO network, whilst also having

the capability to accomplish additional 'lunchtime' and possible evening tasks that would be of benefit to Wales PLC.

If the Welsh Government acquired examples of the type, possibly alongside a 9-seater, then more coherent PSO and non-PSO route planning could be undertaken.

9.5 The importance of strong marketing of the routes is emphasised in many of the technical reports on Welsh PSO's accompanying this one. In a very real sense Wales PLC 'owns' these routes more than the current operator and hence the branding and marketing of these routes might better be undertaken by a para-entity that could be managed by the Welsh Government (WG), Cardiff Airport, or Isle of Anglesey County Council (IACC). Ideally key stakeholders including the air operator would support its work.

9.6 Moreover, the running of the civilian enclave at RAF Valley might also benefit from ownership being consolidated within Cardiff International Airport Ltd, particularly if NASP is required. This would protect IACC being further drawn into areas outside of its core competencies, and existing accountable managers at CWL could have their responsibilities cost effectively extended to cover Anglesey Airport and Welsh PSO route marketing. This arrangement could also provide worthwhile operational cost savings to the WG.

9.7 A more unusual option would be for the WG to enter a Joint Venture with an existing airline to form a company that had at its core a mission to route innovate out of Welsh Airports. The resultant organisation could be designed as a 'not-for-personal-profit' rather than a 'not-for-profit organisations' as it would need to make surpluses (or 'profits') to be financially sustainable. However, care would need to be taken to ensure the company was arm's length and did not receive inadmissible state aid to support its operations.

9.8 These various possibilities need to be considered in greater depth once a decision has been made about the scale of commitment that the Welsh Government wishes to make to support a PSO service network comprising internal, and possibly, London hub links.

9.9 This recommendation is reflected in the final section of the Summary Report (Section 10).

10 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

10.1 This Summary Document has endeavoured to assimilate and present the key market analysis, option appraisal and strategic policy evaluations from between 5-600 pages of supporting material in the background technical reports. Given that the work in those reports has taken close to a year, thinking has moved on in a number of areas, and there have been several helpful discussions with Welsh Government officials. Based on the synopsis of all that work in the preceding chapters of this document, we have identified 12 strategic recommendations for consideration by Welsh Government Ministers; we have then assigned them to what we envisage as a series of important future milestones, creating a timeline that can provide the 'next steps agenda' for the Welsh Government to endorse and then implement.

Immediate Recommendations

Bringing Clarity to the Future of the PSO Service

There is a strong economic case for the retention of the PSO service between Cardiff and Anglesey airports based on the fact that journey time savings to business passengers generates GVA that broadly matches the amount of subsidy being invested. In addition, it also supports existing jobs and has the ability to create new ones, particularly in Anglesey, and provides connectivity with South Wales which neither rail nor road can match for the level of financial support offered. Strategically, it provides an important functional and symbolic link that connects north and south Wales, which facilitates easier access to internal markets for Welsh companies. **Extending the Current Contract**

The PSO shows clear signs of having the potential to grow further than witnessed to date, but in the short term, it needs a period of consistent unbroken operation, scheduling and pricing optimisation and most importantly, better marketing for that growth to be realised. In addition to these essential steps, avoiding further political speculation about the route's future is important if passenger confidence in, and usage of, the route is to grow.

The findings of this study programme suggest that there are a number of short term steps such as reversing the basing of the aircraft, extending weekday operating hours, adding rotations, keeping fares competitive and increasing awareness of the service that could help to enhance the service's performance and improve the value for money that it already offers to Wales. These could all be tested, with the agreement of the operator, if the existing temporary contract were extended sufficiently to allow plenty of time for re-tendering the PSO.

Our economic impact assessment predicts that if a 19-seat aircraft operation were retained, but with extended operating hours and attractively priced fares, then by 2022, the number of passengers using the route could increase from what we considered to be a reasonable approximation of the normalised baseline in 2015 - circa 11,000 passengers per annum (ppa) - to just over 14,200 or 73% seat occupancy. Adding substantially improved marketing (including promotion through GDS systems) and a third rotation would achieve 19,150 (at a seat occupancy of 66%), creating an estimated 20 jobs and additional GVA of approximately £290k per annum.

If we were to apply a similar suite of enhancements, but increase aircraft size to 31 seats and remain with only 2 rotations a day on the route, the return is estimated to be almost 18,000 passengers per annum (a seat occupancy rate of less than 60%), with up to 18 jobs created and GVA in the region of £250k per annum.

This suggests that there is a strong case for extending existing temporary contract to 30 September 2018 - long enough for commercial and operational innovations to be trialled sufficiently to inform the requirements of the subsequent 4-year contract. The extension to September 2018 will also provide reasonable time to undertake the tender process – allowing requirements to be fully scoped, and a future operator to be competitively procured and appointed 6-8 months ahead of the commencement of services. This vital lead time will enable the operator to successfully mobilise and undertake preparatory work before taking over the operational delivery.

Any extension to the temporary contract will require detailed negotiations with the current provider, who may seek additional compensation for taking on additional operational or commercial risks associated with some of the innovations proposed (e.g. basing the aircraft at Anglesey during the summer may need weekend positioning for maintenance to alternatives such as the Isle of Man or possibly Caernarfon). But it also provides a unique opportunity for 'real world' trial of these ideas, and generates invaluable empirical evidence for the medium to long term. With this in mind, we support the extension of the current contract.

Immediate Recommendations:

I	Retain the North-South PSO between Cardiff and Anglesey.
II	Extend the temporary contract with Van Air to 30th September 2018 as soon as possible.
III	In so doing, introduce a series of potential service enhancements and some targeted external support. These should include some or all of the following: ▪ Increase the frequency with which the PSO aircraft is used to 3 rotations per day, either by adding a midday service on the Cardiff-Anglesey route or by identifying with the operator, a commercial non-PSO destination for the aircraft to serve. ▪ Discuss a trial with the operator to test the demand for a reversed timetable by rescheduling the PSO and basing it at VLY for summer 2017. ▪ Extend the operating hours at VLY as soon as this can be agreed with the RAF, but only if the new schedule requires it. ▪ Negotiate any variation required to the current subsidy agreement arising from these changes, subject to an orderly handover being achieved to any new PSO dispensation, especially if it involves a new operator. ▪ Increase the provision of marketing support on a match funded basis – we consider this could mean a capped public contribution of up to £25,000 in the period to September 2017 and a further £50,000 between September 2017 and the end of the extended contract period. ▪ A 'micro-networking' marketing plan needs to be agreed between the airline, the airports and other key stakeholders (north Wales' tourism interests, Isle of Anglesey County Council (IACC) and Gwynedd County Council). WG should lead preparation of the plan via a PSO stakeholder marketing group, but once it is complete, delegate responsibility for implementation to a suitable member of the collaboration. ▪ Resource commitments in cash or kind to be secured from the marketing collaboration members, and identify a way to manage, coordinate and monitor on-going efforts. These commitments can be advertised in the Invitation to Tender document for PSO bidders where they may be presented as match funded undertakings by the operator.

Short Term Recommendations for the Period to September 2018

Maximising Use of the PSO Aircraft

Realistically, even if the aircraft contracted for the Cardiff - Anglesey PSO were to be based at RAF Valley, it would be difficult to achieve four rotations a day without extending the length of the RAF Valley's current operating hours. Initial approaches to the RAF indicated they might be willing to explore some modest variations on weekdays, providing they were appropriately compensated, but would not be willing to introduce weekend operations due to a high proportion of RAF personnel leaving the base

at weekends to return home to family or visit friends. Experience suggests coming to an agreement with the RAF will take some time, and is thus better assigned as a 'short term' rather than 'immediate' recommendation.

The study did, however, identify a number of exciting potential route opportunities the next 4 year PSO contract (October 2018 – September 2022) can be used to explore, especially if the size of the aircraft is increased from 19 to +30 seats. Conceptually, if the implementation of the 'immediate' recommendations has the positive impact on passenger numbers we expect, then the use of a larger aircraft twice a day on the PSO route may ultimately be justified by the end of the next PSO contract period (i.e. 2022) as load factors on a twice a day service would have reached 65%.

However, the big attraction of securing the use of a larger aircraft on the PSO is that it would open up the potential to serve other destinations like a London airport from Anglesey (initially Luton, and eventually when the third runway is open, Heathrow) and similarly other hub destinations like Amsterdam (for which there is evidence of significant demand for a one a day service from North West Wales) or Paris, using the aircraft to add a second rotation from Cardiff. Thirty seat aircraft have the attraction of being pressurised and in some cases substantially quicker than 19 seat equivalents and are therefore more attractive to passengers, are more likely to be accepted as meriting a slot at congested airports and have better route economics at equivalent load factors therefore offering scope for cheaper fares.

Although the prospects for some of these routes (particularly the overseas hubs, may be made more speculative should bids for the next PSO remain based on a 19- seat aircraft, a London flight would remain a possibility, with Northolt a destination that should be explored with the MoD, and there are other domestic options like Belfast or the Isle of Man which may generate interest.

The 2018-22 PSO Tender process

The extension of the current temporary arrangements provides an important opportunity to better adapt the next four year PSO to secure preferred outcomes. These will include:

- seeking a strong operator,
- with a larger aircraft,
- offering credible additional use of the aircraft on non PSO task(s),
- based on a persuasive route development plan that includes increasing patronage and yield, and hence reducing subsidy requests;
- access to extended marketing capability (which may include GDS visibility, interlining, franchising), and
- a persuasive and well thought out marketing plan for extending the commercial reach of the PSO service (geographically and in terms of market segments (e.g. attracting inbound leisure passengers to North West Wales), developing new routes, and working with both Cardiff and Anglesey airports and local stakeholders to optimise the value for money of on-going marketing support.

It also provides a longer lead time before launch to permit optimal preparations and marketing. This includes putting in place new arrangements with the RAF (see below) and marketing the route(s) for several months in advance using micro networking techniques to maximise value for money.

The recommendation around enhanced and sustained marketing provision is based upon the early experience of Highland Airways on the route, where they enjoyed patronage at least 2,000 p.a. more than their successor operators. Highland Airways also enjoyed significant stakeholder support from a range of agencies including IACC, CWL, the Welsh Language Board and deft community micro marketing that was summarised in an appendix to the PSO Enhancement Study. Such techniques (e.g. social media campaigns, competitions with local radio stations, PR stories, cross marketing with attractions and key accommodation suppliers), rather than simply relying on expensive newspaper or poster advertising, are in common use at smaller airports and are recognised as being effective.

Scottish evidence also suggests an uplift in patronage on a PSO, when a higher profile franchise operator took over the route from a standalone airline. There was also evidence from the route when a more 'bolder' yield management strategy, where deeper ticket discounts were offered, had a positive impact on carryings both during Highland Airways' and Links Air's tenures.

Implications of Basing the Aircraft at Anglesey

If, as a result of the 2018-22 PSO tender process, it looks like the operator will be willing to base their aircraft at Anglesey, then a dedicated hangar would likely be a requirement for permanent overnighting. A Rubb-style hangar can be erected within 3-4 months and at modest cost (c£750,000 for a 19 to 31-seat aircraft plus any required groundworks) and has the advantage of being demountable and therefore the capability of being moved elsewhere if needed.

Introducing a 31-seat aircraft would also require the airport at Anglesey to become NASP (National Aviation Security Programme) compliant. This would require level three screening equipment to be introduced and a range of other measures airside to prevent intrusions into the restricted area. Costs are again estimated at c£750,000.

Engagement with the RAF

The RAF is a key partner in the PSO operation providing the airside infrastructure and operations support without which the civil enclave could not operate. Variations to, or expansion of, the current PSO service will require their continued collaboration and in some cases material changes to their existing operating hours. Of the recommendations above, the marketing scheme and probably a single additional midday rotation can be implemented without varying the existing agreement with the RAF/DIO [22]. Initial indications are that they may be willing to show some flexibility, but new arrangements will take time to negotiate and the aim must be to secure temporary dispensations with a new agreement coming into place at the commencement of the new PSO.

The new arrangements are likely to result in additional costs both in terms of additional charges from the RAF for the use of their airfield and capital costs to enhance the capability and capacity of facilities within the existing or expanded civil enclave. The RAF will be justified in passing on these costs in full if they are solely for the purpose of PSO related air transport movements and outside their current core operating hours; moreover, if not cost reflective, this could give rise to issues relating to illegal state aid.

[22] Defence Infrastructure Organisation

The scale of these costs need to be firmed up as quickly as possible and if accepted, turned into appropriate budgetary provision moving forward.

The position concerning to state aid also needs to be confirmed. Although it is possible that a formal notification may not be needed to cover any additional revenue support costs or capital expenditure on enhanced facilities on de-minimis threshold or SGEI grounds for future accounting officer and audit purposes, it would be prudent to secure DfT and EU confirmation of this.

Airport Governance

For a variety of reasons, preparation for the new PSO may provide the opportunity to review the ownership and operation of the civil enclave at Anglesey. These are set out in more detail in Section 9 of the report, but are associated with operating efficiencies, the availability of marketing resources, expertise in security and a seamless approach to Welsh Government policy and implementation.

For this reason, we believe serious consideration should be given to asking CWL (Cardiff International Airport Ltd) to take over the running of the Anglesey Airport operation on the Welsh Government's behalf, at a date to be agreed with Isle of Anglesey County Council (IACC) and their contractor Bilfinger. TUPE rules would mean existing staff would move with any transfer of the operating contract.

We are aware that IACC is currently the legal owners of Anglesey Airport facilities built with the benefit of a long lease from the RAF. However, the costs of the operational management are fully underwritten by the Welsh Government and IACC are under-resourced to take on the expanded client role for a major expansion of the civil enclave envisaged in our other recommendations.

Therefore, it would almost certainly be simpler all round if ownership was transferred to the Welsh Government and they took responsibility for finding an operator.

Services from Hawarden

The possibility of developing service offerings out of Hawarden are, in our view, limited until 2022 and beyond, however, there would be merit in discussing the possibility further with APG and Airbus during the extended contract period so that a clear understanding can be presented to tenderers about the facilities and charges that would be offered to a possible PSO operator if access were to be permitted at all.

Our indicative view, prior to these formal discussions, is that securing access to Hawarden is likely to be too expensive, would require significant capital investment, may attract state aid complaints from the nearby Liverpool and Manchester Airports and makes the continued serving of the North-West Wales region by air, which all the evidence from the supporting technical studies indicates is strategically important, more complicated and therefore potentially also more expensive. Furthermore, on a very strict reading of the PSO Regulations we have doubts about whether the services between Hawarden and Anglesey/Cardiff Airports would qualify as a PSO.

In the longer term (i.e. for the PSO period 2022-26) it may be possible to develop a package of key stakeholder support (especially amongst companies based in the relevant enterprise zones at either end of the route, to secure 9-seat direct service linking Hawarden with Cardiff, but that can be for a future review.

More significantly, in a drop-in or triangulated format (e.g. VLY-CEG (Hawarden)-LHR-CEG-VLY) is the most likely way North Wales will secure direct access to Heathrow when its new runway opens, due to the likely limitations that will be imposed on the number of slots that will be released for domestic services. Such a service would generate very substantial positive benefits in terms of connectivity for the wider economy of North Wales and, in our view, should be aggressively pursued by Welsh Government over the next 2 years for commitments from the UK Government and Heathrow during its DCO (Development Consent Order) process.

Access to Heathrow

Both demand and economic impact investigations indicated that access to LHR would score highly from South Wales as well as North Wales. A shuttle service 3-4 times a day would primarily serve the onward connecting market from South Wales, most of which currently drives and parks at Heathrow. Its impact on the point-to-point market heading for central London from Sout Wales, which will be well-served by improved rail journey times, is expected to be small. But with an overall market we estimate at over 200,000 passengers, securing slots for such a shuttle service from Cardiff to Heathrow would be of great significance economically and ought to be a high priority for the Welsh Government in the short term, with the objective obtaining a commitment, both political and contractual, between the Welsh Government and the UK Government (and arguably also Heathrow) before the Development Consent Order (DCO) application for the third runway is submitted in 2019.

Cardiff Thin Route Support

Our studies identified potential for route development out of CWL both with the PSO aircraft (particularly if it was 29+ seat) as well as for routes defined in the study as 'thin' (less than 50,000 pax per annum). State aid measures above and beyond more normal airport route development mechanisms were examined. In addition to the Heathrow Shuttle above, other hub destinations in mainland Europe like Frankfurt were identified as potentially high performing; especially if a double daily weekday frequency could be reached. A number of domestic routes from Cardiff also look promising and merit further investigation, either because the links currently don't exist or because they would benefit from enhanced daily frequency. These include Manchester, Belfast, Leeds, Newcastle, Aberdeen and Norwich.

Options for securing these objectives include additional PSO's, support from UK Government RACF [23] Funding or a time limited route development scheme established and funded by the Welsh Government itself but in line with established UK - EU protocols.

[23] The Regional Air Connectivity Fund is a DfT initiative to support route development in conformity with permitted State Aid Route Development Funds

Short Term Recommendations:

I. Include the option of supporting a 30-seat aircraft in the 2018-22 tender process and ask bidders to highlight any other destinations they might seek to serve if the PSO were to be awarded on that basis.

II. Issue the Sept. 2018 PSO Tender in Autumn 2017 with aim to award in January 2018.

- Ensure Tender Options explore both current 19 seat solution and larger aircraft solutions (ideally with additional midday PSO or credible non-PSO route development initiatives encouraged).
- Ensure Tender Selection Criteria properly weights preferred outcomes and this will include superior patronage development and marketing plans; basing of aircraft; additional use of aircraft; GDS[3], interlining, franchising or other benefits. Properly weight quality versus cost in evaluation – we suggest 70% to 30% respectively.
- Pre-canvas a sample of operators to better inform the options being tendered.

III. If, as a result of a summer trial in 2017, basing the aircraft in Anglesey and adapting the timetable accordingly looks promising, a site for a hangar will need to be agreed with RAF Valley and a value for money hangarage solution identified and implemented.

IV. If 29+ seater is successful in tender competition then invoke NASP compliance preparations in parallel with lead in time for a new PSO launch. Refine NASP preparations further as a contingency in the interim.

V. Negotiate a new agreement concerning the operation of the civil enclave, covering opening hours, additional charges associated therewith, approval to introduce NASP measures should these be needed in the future and permission to expand car parking and other supporting infrastructure (e.g. an aircraft hangar) if required.

VI. Appoint a project manager for the capital works:

- Draw-up a timetable for designing, securing approval and having budgetary authorisation to complete the works;
- Generate architectural and engineering drawings for the planned physical enhancements (inside and out);
- Specifications for any new equipment associated therewith; ▪ Secure planning and building consent for the designs.

VII. Develop appropriate budget provision– capital and running cost – to cover these items.

VIII. Assess whether state aid approval is needed and either:

- Secure DfT and the European Commission confirmation that formal state aid notification is not required; or

- Submit a notification for the full potential expansion under these recommendations and all those that follow within the next 3 calendar months in order that state aid approval is in place before the operator of the new PSO is chosen and the capital works begin.

IX. Tender and undertake any facilities enhancement work associated with the new operational schedule prior to the new PSO contract commencing.

X. Explore with IACC and CIAL the practicality of CIAL taking over responsibility of running Anglesey Airport and managing the NASP upgrade.

XI. Conclude outline discussions with APG and Airbus about using Hawarden for civilian scheduled services:

- Gain clarity on the need to build a new passenger terminal or re-task the restaurant (which would be less expensive) if NASP was required.
- Explore APG's appetite for investment in any such civilian air service initiatives.
- Ensure Airbus is informed and content with how things are 'left'.
- Seek 'North Wales' slots at LHR3 for a triangulated air service.
- If SET obtained for HAW-CWL (see below) consider other permutations for the aircraft (e.g. HAW-CEG).

XII. Pursue the case for slot access from CWL and VLY to LHR strongly with DfT and the wider UK Government.

XIII. Active support should be offered to CWL for 'thin route' development, independent of, but complementary to, the existing PSO, using either further PSO designations or a formally authorised Route Development Fund (RDF) to bolster standard airport commercial efforts in this area, but also to act as an alternative to discounted APD (Air Passenger Duty) if this power is not ultimately devolved to the Welsh Government.

- Explore further national and international PSO designations.
- Develop a formally authorised Route Development Fund (RDF); most probably based on similar methodology to the already approved DfT Regional Air Connectivity Fund.
- Anticipate and counter competition and state aid complaints from Bristol Airport and establish definitively that Bristol and Cardiff do not share the same catchment area. This is crucial to all potential initiatives in this area. Commission a Catchment Study that supports the case for this assertion.

Medium to Long Term (2019+) Recommendations

Expanding the Network from North West Wales

As outlined above, the new PSO (i.e. 2018-22) is likely to be the opportunity to consolidate any trial undertaken in basing an aircraft in North West Wales. This maximises the opportunities for developing additional routes from there. The subsequent PSO (2022-26) might then be used as the chance to expand the network of routes from Anglesey by adding additional services and possibly introducing a further PSO and aircraft.

Single Engine Turbines

It is arguable that this is also the time for a decision to discount the use of 9-seat Single Engine Turbines (SETs) at higher frequencies on the main PSO route. Of the SETs considered the Pilatus PC12 is the most attractive option but costly to run; the Cessna Caravan offers lower costs but does not provide an attractive passenger environment and only achieves minimal cost savings compared to a 19- seat aircraft if there is sufficient demand to justify three rotations a day. The SETs would also introduce significant constraints on seat capacity and could affect future levels of demand as there is evidence that some passengers will avoid flying on very small aircraft (as happened during Links Air's use of a King Air on the PSO in December 2015).

The use of SETs should only be contemplated if demand drops precipitously or to less than 7,500 passengers on an annual basis and it is considered desirable to maintain the PSO service. With this exception, it is our view that the use of SETs could be restricted to long-term options such as a (HAW) Haverfordwest – CWL to offer connecting flights to a Heathrow shuttle from Cardiff, and to any crosscountry options (e.g. HAW - CEG (Hawarden) or Llanbedr to Cardiff as and when these are considered necessary or expedient. **Aircraft ownership Option**

In addition to keeping the progress of the PSO under close scrutiny and ensuring its cost-effective delivery, the issue of potential ownership of the aircraft being used should be explored further as option, perhaps with an eye on the 2022-2026 PSO period.

Medium – Long Term Recommendations:

I.	Review future route prospects, when the performance of services provided under the 2018-22 contract becomes clear.
II.	Do not pursue SET for current PSO. Revisit SET if CWL gains access to LHR. This aircraft could then provide a useful feeder flight from HAW to CWL, for its shuttle to LHR and also offer the potential to provide a CEG-CWL link.
III.	Explore the possibility of a Joint Venture with an operator to be developed to help share risk and allow the Welsh Government to benefit from any acquisition of Heathrow slots.

APPENDIX A: BIBLIOGRAPHY

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- July 2014 - 164 responses. The results are taken from the 2015 Arup report, supplemented by further analysis of the raw survey data;
- September-October 2015 - 100 responses. The completed questionnaires were analysed alongside a full statistical review for the 2016 Enhancement study; and
- 85 responses from a recent Van Air / CityWing 2016 passenger survey are also incorporated into this report.

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- Evaluation of the Scottish Air Route Development Fund; for Scottish Enterprise, Scottish Government, Visit Scotland & HIAL. Wilson, S. (2009).

APPENDIX B: MEETINGS AND CONSULTATIONS

Organisation	Individuals
Isle of Anglesey County Council	Dewi Roberts, Michael Thomas, Jennifer Clark
Gwynedd County Council	Llyr B. Jones
Pembrokeshire Council	Barry Cooke
Denbighshire County Council	John Rooney
Citywing	David Buck (by Phone and email)
Bilfinger Europa Facilities Management	Donna Williams; Gemma Williams, Lesley Thomas and Angelica Williams
RAF Valley	Sq. Leader Jon King
Special Branch Holyhead Police	Keith Horton
Visit Wales	Andrew Forfar
North Wales Tourism	Jim Jones

University of Bangor	John Hughes
Hawarden Airport - Airbus UK	Paul Bastock, Richard Kinnear and Steve Thomas
Hawarden Airport - Airport Park Group	Carl Poland, Andy McKinney, Darren Williams in person and Caroline Craft by Phone
Caernarfon Airport	Peter Smith (and Roy Steptoe - by Phone)
Aberporth Airport	Jason Cameron (and Lee Paul - by Phone)
Llanbedr Airport	Roy Mann
Haverfordwest Airport	ATC Team and Pembrokeshire County Council
Pembrey Airport	Capt. Winston Thomas and Peter J P Obeysekere
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APPENDIX C: STUDY TEAM

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Dewick.

Northpoint Aviation Team

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Access to Apex Route Model and Gravity Modelling RDC

Aviation.

Welsh Government: Evidence Paper in advance of the Public Accounts Committee
Scrutiny Session – 4.06.18

Cardiff-Anglesey Intra Wales Air Service Public Service Obligation (PSO)

SECTION 1: The salient findings of the RPS/Northpoint review and any action the Welsh Government has agreed to undertake from the findings.

SECTION 2: Clarification of the current contractual position.

SECTION 1: The salient findings of the RPS/Northpoint review and any action the Welsh Government has agreed to undertake from the findings.

In early 2016, the Welsh Government commissioned a thorough review of the PSO Air Service, which was undertaken by external aviation specialists RPS and Northpoint Aviation. A Public Service Obligation (PSO) is a publically-funded service which would not otherwise operate commercially. The review considered a wide range of matters for the future of the service including broad context, marketing and market conditions, location options, airfields, airlines, regulation, ownership, security, scheduling, rotations, technical issues and a range of other matters. Below is a high level summary of the salient findings of the review.

Findings

- The review strongly recommended the continuation of an Intra Wales Air PSO between Cardiff and Anglesey.
- The route had previously suffered from failure primarily due to the selection of small, susceptible operators.
- Passengers had been put off by smaller aircraft, inconsistent schedules and safety issues associated with small operators and their aircraft.
- Despite the previous failures, there is a real opportunity to consolidate and grow the service going forward.
- A larger, more substantial airline with bigger aircraft would improve customer perception and confidence, thereby increasing demand.
- The subsidy cost of a larger operator is likely to be greater; however the increase in cost is likely to generate an increase in Gross Value Added (GVA).
- At the time of the review, the GVA generated by the PSO was approximately equivalent to the subsidy cost being paid to the operator at that time.
- There are opportunities to improve Anglesey Airport which would in turn enhance the success of the PSO, and increase the economic benefits to North West Wales.

Actions and Timescales

- **November 2014**: Links Air began operating 4 year contract after it won a full and competitive tender (2 bidders – Links Air and Van Air).
- **October 2015**: Links Air's Air Operating Certificate was suspended by the UK aviation regulator, the Civil Aviation Authority (CAA) on grounds of safety.
- **January 2016**: Links Air ceased operating the service with no notice (Friday afternoon).
- **January 2016**: City Wing & North Flying stepped in to operate a joint 3 week contract ensuring continuous service provision, while competitive procurement was undertaken. Services began on the Monday morning.
- **February 2016:** Van Air won 7 month emergency contract (3 bidders – Van Air, Eastern Airways and North Flying).
- **Spring 2016:** The Cabinet Secretary for Economy & infrastructure ordered a full review of the PSO air service, which was undertaken by external specialists RPS and Northpoint Aviation.
- **September 2016**: Van Air's contract was extended to May 2017 while the review of the service was completed.
- **March 2017**: the CAA withdrew Van Air's Foreign Carrier Permit (enabling it to fly in UK airspace) on the grounds of safety. As a direct result, Van Air's partner organisation Citywing subsequently went into liquidation shortly afterwards, resulting in Van Air no longer being able to successfully deliver the contract).
- **March 2017**: Eastern Airways was appointed via a 1 month rolling emergency contract ensuring continuous service provision. Services began on the Monday morning.
- **July 2017**: The First Minister announced the Cardiff-Anglesey PSO would continue to be supported by the Welsh Government for the long term.
- **December 2017**: Eastern Airways contract was extended to March 2018.
- **January 2018**: The final report was published by the Welsh Government.
- **March 2018**: Eastern Airways contract was extended to September 2018.

The review of the service was initiated in a time of considerable uncertainty for the PSO, as a result of the political and economic changes that Wales and the UK was faced with. The EU referendum result was taken into consideration alongside a change of aviation regulations for using smaller aircraft on scheduled services across the UK and a second operator-failure in around 15 months.

The initial scope of the review was significantly increased in line with the above changes, resulting in wide ranging results and complex findings from a number of different studies which were undertaken over a 12 month period. These then needed to be brought together to provide a single overarching picture which would enable the consultants to make sound and clear recommendations for Ministers on the future of the PSO.

A number of draft technical reports were received by officials during 2016 and early 2017 which were then subject to significant challenge. We wanted to ensure the evidence presented was robust and clear, and we worked with the consultants to simplify as much of the technical information as possible.

Whilst the overall findings of the report and the recommendations to retain and grow the service had been made clear by July, the above mentioned simplification and refinement of the

published report was undertaken in the latter half of 2017, enabling the final report to be published in January 2018.

Continuing to provide intra-Wales air connectivity via the Cardiff-Anglesey PSO is a clear, ongoing Ministerial priority. This includes ambitions to grow the route significantly over the next contract term, aiming to increase patronage on the route sufficiently to enable the increase in size of aircraft used to a circa 30 seat operation. This will in turn present opportunities to do more with the aircraft during 'PSO downtime' – for example, during the middle of the day, evenings or weekends, and has the potential to reduce the level of subsidy that is required to operate the route.

In addition to growing the existing PSO, Welsh Ministers also have ambitions to increase air connectivity from Wales to other economically important parts of the UK. As such, officials have been working to develop an economic case for a suite of new PSO air services linking Wales to wider parts of the UK such as Scotland, northern and eastern England, and London. In preparing for Brexit, we must make every effort to put Wales in a strong economic position. 80% of Welsh exports are to the rest of the UK, so it is vital that we make travelling to other parts of the country fast and convenient in order to support Welsh businesses. The Cabinet Secretary for Economy and Transport will be making a statement on the proposed new PSO air routes shortly.

The latest contractual position is set out in Section 2.

Securing a more robust and resilient airline to operate the route

It has become clear that the long term success and stability of the PSO requires a larger, more robust and resilient operator to be secured. The Welsh Government secured (under a short term contract) such an operator in Eastern Airways, which is a Type A licence holder.

In aviation terms, there are two types of licence holders - Type A and Type B. Type A licence holders are able to operate large aircraft, and are robust, stable businesses which are rigorously regulated (including financially tested) by the UK aviation regulator, the Civil Aviation Authority (CAA). Type B operators are typically small, financially susceptible airlines with private ownership and a small fleet of small aircraft. The CAA does not regulate Type B operators to the same degree as it does for Type A operators.

Prior to Eastern Airways taking over the PSO in March 2017, the Welsh Government had previously contracted Type B operators to deliver the service. This was largely due to the size of aircraft required to operate at Anglesey, but cost was also a factor. It is considered that having a Type A airline operating the PSO would bring significant long term benefits and opportunities which have not been available in the past. Eastern Airways has already achieved significant progress in increasing the number of passengers using the route (an increase of around 40% when compared to the previous year) and has secured an 'alliance arrangement' with Flybe to bring other passenger benefits such as code sharing opportunities and wide ranging visibility on booking systems.

Growing the route and increasing aircraft capacity

Over the last 12 months Eastern Airways has stabilised the route, re-established passenger confidence and successfully increased patronage by almost 40% when compared to the

previous year, demonstrating that when a larger, well established operator is running the route, there is clear potential to expand the PSO. Successes from the last year include

- The annual average load factor during 2017/18 was 79%, compared to an average load factor on other Cardiff domestic routes of 65%.
- 13,845 passengers were carried on the service; an increase of around 40% when compared to the previous year. We are now seeing passenger numbers comparable to those recorded when the service first launched 10 years ago when passenger numbers were at their highest.
- During 2017, 94% flights departed on time or within an hour of their scheduled departure time. The average delay for the PSO was just 11 minutes; compared to an average delay on other Cardiff flights of 15 minutes.
- During 2017/18, 97% of flights operated. Out of the 23 cancellations, 8 were due to technical reasons and 15 weather related issues at either Cardiff or Anglesey.

The forthcoming tender will be seeking to achieve growth on the route, flexibility in delivery and service enhancements. We will ask the market to respond suggesting how best to meet these aspirations.

Anglesey Airport Security Arrangements

Increasing the security arrangements at Anglesey Airport is an area where benefits could be achieved. Benefits could include:

- The ability for the operator to use a larger aircraft, which would carry more passengers; and
- The ability for passengers to arrive 'clean' at Cardiff Airport and go directly to their connecting flight rather than having to disembark at arrivals and to go back through check in and security for any onward travel.

It is understood that both capital investment at Anglesey Airport and a variation to operational procedures at the airport would be required to achieve compliance with the relevant Department for Transport's security arrangements and hence secure the associated benefits.

The Welsh Government has committed to investigate this option further, and will consider if, and how, any appropriate investment might be made. In this respect, we will engage a key stakeholder group to work collaboratively in order to make any future decisions pertinent to Anglesey Airport. Stakeholders include Anglesey Council, the airport operator, the MoD (at RAF Valley), Cardiff Airport, the CAA, and the Department for Transport in UK Government.

SECTION 2: Clarification of the current contractual position.

The Cardiff – Anglesey PSO has been subject to a number of well-publicised failures which most recently put the service under an immediate threat of closure. In order to mitigate this threat, we took a risk based approach and immediately replaced the failing airline with the current operator, Eastern Airways. Eastern Airways was our primary choice due to it being the second suitable bidder from the February 2016 tender (which was won by Van Air). No formal

expressions of interest have been received from other airlines in respect of operating the current Eastern Airways contract.

Due to the urgent and unusual circumstances which gave rise to the contract with Eastern Airways we put in place an emergency 1 month rolling contract. The airline operates a twice daily service between Cardiff and Anglesey enabling business trips in both directions. The contract provided Welsh Ministers with time to consider the future of the PSO and mitigate similar operator failures going forward. Ministers have the ability to terminate the temporary contract at any time – in effect this will be when the new contract is in place.

Over the past six months, we have been pursuing a derogation of security regulations at Anglesey Airport and have been in contact with both the CAA and Department for Transport. The derogation has the potential to bring significant benefits to the PSO by allowing aircraft weighing up to 15 tonnes (rather than <10 tonnes) to fly in and out of Anglesey. This would allow a circa 30 seat capacity aircraft to be used on the route – resulting in around a 50% increase in available passenger seats, which in turn would encourage sustainable growth and fulfil the increase in passenger demand that Eastern Airways has experienced over the last 12 months. Approval of the derogation would enable the more substantial (Type A) airlines to bid for the service. As such, we made the decision to postpone the procurement while we explored this further.

Unfortunately officials have recently been informed that the derogation will not be granted. Whilst this is extremely disappointing, it has now given us clarity and we are now preparing to procure a new 4 year contract for the service. It is anticipated that the procurement will be launched in June. The procurement will seek to secure a long term operator with a view to ensuring the growth aspirations for the service are realised. The procurement will take a minimum of 6 months to comply with mandated time scales. We will advise the Committee when the tender has been launched.

WRITTEN STATEMENT
BY
THE WELSH GOVERNMENT

TITLE **Update on the development of aviation Public Service Obligations (PSO)**

DATE **24 May 2018**

BY **Ken Skates, Cabinet Secretary for Economy and Transport**

In 2016, I requested a thorough review of the Intra Wales Air Service, which looked at a wide range of options from ceasing the service entirely to changing service patterns, increasing provision and upping the aircraft size. The review made a number of recommendations to retain and grow the service for the benefit of the Welsh economy. It is important that we connect the outermost regions of Wales with our capital city and I made a commitment to continue to support the route in the long term.

In order for the intra-Wales PSO to be successful, we need it to grow and be given the stability of a long term operator. Despite two operator failures in recent years, the Cardiff-Anglesey air service has seen significant growth of around 40% during the last 12 months, demonstrating clear demand for the service and its long term potential when operated by a well established airline with access to a mature ticket sales channel.

The service now needs to be offered to the market again, and I aim that the tender will launch in June, securing a long term operator by the end of the year. My officials will be looking to secure a reliable, experienced, established operator who shares our ambition to grow and develop the route. In turn, this will support our ambition to progress to a larger aircraft, eventually looking to offer new air services from North Wales; increasing onward connectivity for the whole region.

Connectivity with the rest of the UK (with which 80% of Welsh businesses trade is undertaken) is an important way of boosting our domestic economy, especially as we move towards Brexit.

A further factor to consider is HS2, a UK project that the Welsh Government continues to support. Whilst in the future, if the UK Government chooses the right option at Crewe and for rolling stock, it will offer significantly improved connectivity and economic advantage for North Wales, the UK Government's own figures suggest that South Wales could see a £200m detrimental impact on its economy as a result of HS2. It is vital that we find ways to protect the economy of south Wales through improving its connectivity.

We have therefore been working with the European Commission and counterparts in UK Government to impose a number of new aviation Public Service Obligations (PSOs) routes. An operator who wins the right to a PSO secures exclusivity and the security of a 4 year term of operation.

PSO routes are also exempt from Air Passenger Duty (APD), meaning that return journeys on new domestic PSO routes will benefit from the removal of £26 of tax imposed by the UK Government – a tax which the Silk Commission recognised should be devolved to Wales, but whose devolution the UK Government has consistently resisted.

In my 2017 'Prosperity for All Economic Action Plan', I acknowledge the need to better connect Wales with the rest of the UK. Improved air connectivity is an important means of growing the economy and reducing inequality.

Developing new air links will open up options for better connecting Wales' economy with other transport and economic centres across the UK, so helping investment and business. Developing aviation connectivity contributes to a more rational UK aviation strategy and supports the core principles of the recent UK Industrial Strategy green paper – to support and develop the growth of the UK's regions.

Through the introduction of a new domestic PSO route network, I aim to:

I. Ensure adequate frequency on some thin, but strategic routes that would not otherwise exist under free market conditions. Defining certain minimum obligations.

II. Underpin economic prosperity and opportunity by providing vital links for business.

III. Address the dis-economies of seasonal demand variation and ensuring year-round continuity and frequency of service.

IV. Ensure where practical, that travellers at both ends of the route can achieve an effective day's work at either end of the route throughout the year.

V. Provide a proportionate and cost-effective solution in these times of pressured budgets.

VI. Ensure the travelling public (its citizens and guests) enjoys competitive pricing and high levels of service as a result of open tender competition. Improved air links will also provide a social benefit to the Welsh diaspora across the UK when visiting 'home' and improving UK tourist access to Wales.

The routes I have asked my officials to explore with the market are:

- Cardiff-Manchester
- Cardiff-Leeds Bradford
- Cardiff-Humberside
- Cardiff-Glasgow (double daily return compared with the single daily return currently commercially offered)

- Cardiff-Aberdeen (direct return compared with the indirect currently commercially offered)
- Cardiff-London (important in the light of the recent commercial failure of this route)
- Cardiff-Newquay
- Cardiff-Inverness
- Cardiff-Norwich

For all of these routes there has been a degree of market failure – perhaps through the market not providing sufficient frequency for business travellers, routes having been tried and terminated in the past or new routes that have not previously been supported by the market at all.

A stage 1 transport appraisal considering policy compatibility and environmental impacts has been undertaken on all of the routes we are proposing. CO2 emissions were scrutinised, and the analysis looked at comparators between air and surface routing (eg car and train). The relative passenger/km carbon emissions were not considered to be materially different between the modes.

I would like to explore with the market whether offering a 4 year period of exclusivity, along with the benefits of Air Passenger Duty exemption from which PSOs benefit, will be sufficient incentive. The new routes will be procured through public tender. Transport for Wales will be leading the procurement process and I hope services will commence in spring 2019. Other than some modest marketing budget, I do not intend to provide any further subsidy for these new routes. Early market indication is the proposed incentives may be sufficient for many, if not all, of these routes to operate in this way – but only a formal tender process will flush that out. If the market does not think these incentives are sufficient for a particular route, then no contract will be awarded for that route.

I will review the market appetite for these routes, and will consider other routes, including to European destinations, as well as to and from other airports in Wales in the future if this approach is successful.

I am committed to pursuing the devolution of APD to Wales. The reduction or removal of APD should inject competition back into regional airports, and encourage airlines to introduce new regional routes, increasing airline competition, therefore increasing the choice for the travelling public.