GATWICK AIRPORT ROUTE 4 INITIAL OPTIONS APPRAISAL - FULL ANALYSIS TABLE

71248 054 Submission 2 Issue 1

Group	Impact	Level of Analysis	Option 0 - Current Conventional 6M, 6V Replication (Do Minimum Option [baseline - future])	Option 1 - Fly-By Fly-b (LAM 1X)	Option 2 - Fly over Fly-by (LAM 2X) direct SUNAV	Option 3 - Fly-by Fly-by (Apparent dispersion late in turn)	Option 4 - Fly over Fly-by (Multiple initial turn points)	Option 5 - Fly-by Fly-by (Lower speed vs Option 1)	Option 6 - Fly over Fly-by (Multiple initial and turn points)	Option 7 - Constant radius to Fix (Tracks concentrated)
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative	Option 0 (the Do Minimum Option) is a replication of the conventional LAM 6M 6V procedure. As with the conventional procedure (Baseline) there is a degree of dispersion located around the turn. It is acknowledged that this turn is not fully contained within the existing NPR swathe, however, this is similar to todays operation. As a result, there is expected to be very little difference in terms of impacts over the ground between Option 0 (Do Minimum Option) and Baseline (Todays operation), however, it is acknowledged that this option includes dispersion in line with the wishes of community stakeholders.	The track of Option 1 takes it inside the village of Capel (to the east) and outside the village of Beare Green (to the west). After flying straight ahead after take-off, the aircraft will make its first turn not below 2500ft. The flight profile of this option will seek to minimise the adverse impact of noise in the area between these 2 villages. These villages are not directly overflown. However, this option does not include dispersion, which is against the wishes of community stakeholders.	This option uses the same turn as Option 8, but the track adjustment is removed and a new waypoint, NEW11, is placed where the aircraft would nominally roll out of the turn. This option is flown at optimal speed. This option tracks to the east of the village of Capel but overhead the village of Beare Green. From NEW 11, just south of Reigate, the aircraft speed restriction is lifted from 220 KIAS to 250 KIAS. It is acknowledged that this option includes dispersion in line with the wishes of community stakeholders.	Aircraft will fly straight ahead for 3.8NM, climbing to be not below 1100ft before turning towards 3 waypoints (south of Reigate) which are placed abeam each other with the intention of providing a degree of apparent dispersion. The aircraft will climb to not below 3200ft. In the initial stages of flight, the speed is restricted to 200KIAs in the turn. Once through the turn the speed restriction is lifted to 220KIAS and then south of Redhill the restriction of 220KIA is lifted to 250KIAS and a climb to not above 4000ft. This flight profile avoids the main towns of Reigate and Redhill and avoids direct overflight of the villages of Beare Greene and Capel. It is acknowledged that this option includes dispersion in line with the wishes of community stakeholders.	This option has 3 initial turning points at which aircraft will not turn below 1500ft to provide apparent dispersion in the turn. Following the turn, aircraft will climb to be above 3200ft at a point south of Reigate. Once south of Redhill, aircraft will climb to not above 4000ft and the speed restriction will lift from 200KIAS to 250KIAS. The dispersion will continue until south of Redhill at which point the track will route direct to SUNAV. This option reduces the noise from overflights in and around the villages of Beare Greene and Capel but may increase noise impacts in and around Leigh. It is acknowledged that this option includes dispersion in line with the wishes of community stakeholders.	This option uses the same methodology as option 1 with the exception that the speed is reduced to 200KIAS the result of which is the waypoints being placed closer together. The track of this option takes it to the east of Capel and to the west of Beare Greene. The speed restriction is lifted to 250KIAS to the south of Redhill. This option may increase noise in and around the village of Beare Greene whilst there may be reductions in noise impacts in and around Capel and Holmwood Common. However, this option does not include dispersion, which is against the wishes of community stakeholders.	This option will result in apparent dispersion in, and following, the turn due to the placement of multiple initial and turn points. There will be some overflight of Beare Greene and Capel but aircraft will be not below 1500ft before turning and then must be not below 3200ft south of Reigate and not above 4000ft south of Redhill. This option is designed to be flown at an optimum speed of 220KIAS. It is acknowledged that this option includes dispersion in line with the wishes of community stakeholders.	Option 7 is expected to produce concentrated tracks over the ground throughout the turn. Currently, this option routes to the east of Capel and skirts just to the west of Beare Greene. Aircraft should be not below 1500ft as they turn towards a waypoint just to the south of Reigate, by which aircraft should be flying not below 3200ft. At the waypoint to the east of Salfords and south of Redhill aircraft should be not above 4000ft before tracking direct to SUNAV. Due to the concentration of tracks there may be some changes to the noise impacts in and around the villages of Beare Greene, Capel and Leigh. However, this option does not include dispersion, which is against the wishes of community stakeholders.
Communities	Air Quality	Initial Options Appraisal: Qualitative	As is the case within Baseline (todays operation) this option is expected to have a limited impact on local air quality. It is acknowledged that this option may fly within the vicinity of AQMAs and the East Surrey Hospital, however any overflight (other than that in the immediate vicinity of Gatwick Airport) shall occur above 1,000ft. As specified in CAP 1616 Appendix B, Paragraph B74, it is therefore unlikely that there will be an impact on local communities (including the East Surrey Hospital) due to the effects of mixing and dispersion above 1,000ft. Overflight of areas within the immediate vicinity of Gatwick Airport (below 1,000ft) is unavoidable due to strict airspace design and safety constraints.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.	When compared to the baseline scenario (the Do Minimum Option) there is expected to be no changes to the tracks over the ground and as such there is expected to be no change to air quality below 1,000ft.
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	Option 0 (the Do Minimum Option) has been designed to replicate as close as practically possible (given design constraints) todays operation (Baseline). Therefore, it is expected there will be no difference in track mileage (and therefore greenhouse gas emissions) meaning impacts over the ground will be the same.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally more greenhouse gases based on the fact that it is 0.9 nm longer.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally less greenhouse gases based on the fact that it is 0.2 nm shorter.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally more greenhouse gases based on the fact that it is 0.2 nm longer.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally more greenhouse gases based on the fact that it is on average 0.1 nm longer.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally more greenhouse gases based on the fact that it is 0.2 nm longer.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally more greenhouse gases based on the fact that it is on average 0.4 nm longer.	Compared to the baseline scenario (Option 0), this option is expected to emit marginally less greenhouse gases based on the fact that it is 1 NM shorter.
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	There is no difference between Baseline (todays operation) and Option 0 as both support the current Gatwick Airport capacity cap and equally offer the same level of resilience in the Gatwick Airport operation in the event of an issue with another departure procedure.	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).	At this stage of the CAP 1616 process, stakeholder feedback has indicated that this option may require increased departure separations. Further work in Stage 3 of the CAP 1616 process will be required to determine the exact impact. With regards to resilience, there is deemed to be no difference between this option and the baseline scenario (Do Minimum option).
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	There is no difference between Baseline (Todays operation) and Option 0 (Do Minimum Option) as both options remain clear of the nearest National Park (South Downs NP) and although Gatwick Airport itself is out with the boundary of any AONB, it is acknowledged that both Baseline (Todays operation) and Option 0 (Do Minimum Option) do overfly both the Surrey Hills and Kent Downs AONBs. However, overflight of these areas will occur above 1,000ft, as they do today. From a noise perspective, Option 0 is not contained within the NPR swathe and as a result flies over the Surrey Hills AONB (between 1,500ft and 3,200ft or higher) however, this is unavoidable due to strict airspace design and safety constraints.	There is no difference between this option and Option 0 (Do Minimum Option) as both options remain clear of the nearest National Park (South Downs NP) and although Gatwick Airport itself is out with the boundary of any AONB, it is acknowledged that both this option and Option 0 (Do Minimum Option) do overfly both the Surrey Hills and Kent Downs AONBs. However, overflight of these areas will occur above 1,000ft, as they do in the baseline scenario. From a noise perspective, Option 0 is not contained within the NPR swathe and as a result flies over the Surrey Hills AONB (between 2,500ft and 3,000ft or higher) however, this is unavoidable due to strict airspace design and safety constraints.	There is no difference between this option and Option 0 (Do Minimum Option) as both options remain clear of the nearest National Park (South Downs NP) and although Gatwick Airport itself is out with the boundary of any AONB, it is acknowledged that both this option and Option 0 (Do Minimum Option) do overfly both the Surrey Hills and Kent Downs AONBs. However, overflight of these areas will occur above 1,000ft, as they do in the baseline scenario. From a noise perspective, Option 0 is not contained within the NPR swathe and as a result flies over the Surrey Hills AONB (between 1,500ft to 3,200ft or higher) however, this is unavoidable due to strict airspace design and safety constraints.	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Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to today's operation. The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as today.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.	There is no anticipated impact on any biodiversity receptors as a result of this ACP, simply because of the minimal changes made in terms of aircraft routing, when compared to the baseline (Option 0). The change sponsor acknowledges that areas occupied by Ancient Woodland, European Protected Species and Bird Conservation Targeting Areas are overflown by this option, however this is the same as the baseline scenario.
General Aviation	Access	Initial Options Appraisal: Qualitative	There is no anticipated change between Option 0 (Do Minimum option) and todays operation (Baseline [current]). GA users of Gatwick Airport will arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.	No change when compared to the baseline scenario (Do Minimum option). GA users of Gatwick Airport will continue to arrive and depart under extant operational arrangements.

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Group	Impact	Level of Analysis	Option 0 - Current Conventional 6M, 6V Replication (Do Minimum Option [baseline - future])	Option 1 - Fly-By Fly-b (LAM 1X)	Option 2 - Fly over Fly-by (LAM 2X) direct SUNAV	Option 3 - Fly-by Fly-by (Apparent dispersion late in turn)	Option 4 - Fly over Fly-by (Multiple initial turn points)	Option 5 - Fly-by Fly-by (Lower speed vs Option 1)	Option 6 - Fly over Fly-by (Multiple initial and turn points)	Option 7 - Constant radius to Fix (Tracks concentrated)
General Aviation / commercial airlines	Economic impact from increased effective capacity	Initial Options Appraisal: Qualitative	The baseline scenario (Do Minimum Option) is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. There is no change to the economic impact between Baseline (Todays operation) and Option 0 (Do Minimum Option).	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.	This option is not designed to facilitate extra capacity but to enable the full use of the current capacity. Additionally, this ACP is not expected to reduce the flow of air traffic out of the airport overall. It is acknowledged that there may be an additional constraint based on possible increased departure separations and may therefore, have a negative effect on passenger numbers and cargo tonnage carried. More work will be conducted at Stage 3 to confirm.
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The Do Minimum baseline (Option 0) is 26.1 nm long. This is measured to SUNAV rather than all the way to LAM, which is consistent throughout as the remainder of the procedure is the same. There is no difference between Baseline and Option 0. As such, there is expected to be no change to fuel burn.	Option 1 is 27.0 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 1 is 0.9 nm longer and is therefore expected to have a marginally worse impact in terms of fuel burn.	Option 2 is 25.9 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 2 is 0.2 nm shorter and is therefore expected to have a marginally better impact in terms of fuel burn.	Option 3 is 26.3 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 3 is 0.2 nm longer and is therefore expected to have a marginally worse impact in terms of fuel burn.	Option 4 ranges from 25.8 nm to 26.7 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 4 on average is 0.1 nm longer and is therefore expected to have a marginally worse impact in terms of fuel burn.	Option 5 is 26.3 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 5 is 0.2 nm longer and is therefore expected to have a marginally worse impact in terms of fuel burn.	Option 6 ranges from 25.8 nm to 27.3 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 6 on average is 0.4 nm longer and is therefore expected to have a marginally worse impact in terms of fuel burn.	Option 7 is 25.1 nm long measured from Gatwick Airport to SUNAV. When compared to the baseline scenario (Option 0), it is acknowledged that Option 7 is 1 nm shorter and is therefore expected to have a marginally better impact in terms of fuel burn.
Commercial airlines	Training costs	Initial Options Appraisal: Qualitative	There is no difference between Baseline (Todays operation) and Option 0 (Do Minimum option) as there are no new training costs due to PBN procedures being in place for other departure routes at Gatwick Airport.	No additional training predicted.	No additional training predicted.	No additional training predicted.	No additional training predicted.	No additional training predicted.	No additional training predicted.	No additional training predicted.
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	There is no difference between Baseline (Todays operation) and Option 0 (Do Minimum option) as there are no known other costs due to PBN procedures being in place for other departure routes at Gatwick Airport. It is not proportionate for Gatwick Airport to assess potential other costs for commercial airlines - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (e.g. aircraft types, on-board system capability etc.) to consider these effectively.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.
Airport / Air navigation service provider	Infrastructure costs	Initial Options Appraisal: Qualitative	There is no difference between Baseline (Todays operation) and Option 0 (Do minimum Option) as there are no new infrastructure costs within this ACP.	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).	This option is expected to incur a minor deployment costs associated with any necessary software updates to facilitate changes to the departure separation requirements (if required).
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	Baseline (Todays operation) requires a functioning conventional navigational beacon while Option 0 (Do Minimum option) does not, therefore there is a theoretical reduction in Operational Costs with the introduction of any PBN route if it enables the switching off of a conventional navigational beacon. This saving is not allocated to Gatwick Airport but to NATS who own and maintain the conventional navigational aids.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.	No change expected when compared to the baseline scenario.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	There is no difference between Baseline (Todays operation) and Option 0 (Do Minimum option) as there are no additional costs to the deployment of a PBN procedure when all other departure procedures at Gatwick Airport are already PBN.	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).	This option is expected to incur minor deployment costs associated with any training provided to ATC to support changes to the departure separation requirements (if required).
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative	It is assumed that to replicate the current (and safe) conventional procedure with a fully compliant PBN design is also safe. The primary means by which it is intended to provide safety assurance evidence to support the Gatwick Airport ACP is a Safety Case. The Safety Case is under development, and has recently been reviewed due to the outcome of the first Stage 2 submission and with reference to the Baseline (Todays operation); the Safety Case includes claims, arguments and evidence that current operations at Gatwick Airport are safe and this is a key assumption of the Safety Assurance Activities in Stage 2. Assurance evidence that extant operations are safe will be provided in the Full Options Appraisal during Stage 3.	ATC may need to increase departure separation on the runway in order for this to be a safe operating procedure; this would result in a decrease in the runway capacity.	There is a view from ATC that this option would conflict with following aircraft also using this Gatwick Airport Route 4 SID. The design incorporates a degree of dispersion during the turn. Aircraft on the "inside" of the dispersion swathe may come into conflict with aircraft on outside of the dispersion swathe. Additionally, aircraft will likely choose different points at which to roll out to SUNAV, dependent upon aircraft type/performance and wind. The design does not account for prevailing wind direction.	There is a view from ATC that this option would conflict with following aircraft also using this Gatwick Airport Route 4 SID. The design includes 3 waypoints placed abeam each other at a distance of 278m with the intention of providing a degree of managed dispersion. This results in several potential routes that an aircraft may take, however this cannot be scheduled or planned. ATC will not know the aircraft's intention. There will be an increase in the workload for both ATC and the Flight Crew; worst case may result in a loss of horizontal and/or vertical separation between aircraft.	There is a view from ATC that this option would conflict with following aircraft also using this Gatwick Airport Route 4 SID. The design utilises three initial turning points placed sequentially 400m apart. This results in several potential routes that an aircraft may take and a degree of dispersion. However, the choice of turning point cannot be predicted. ATC will not know the aircraft's intention. The SID design also does not account for prevailing wind direction.	There is a view from ATC that this option would conflict with following aircraft also using the Gatwick Airport Route 4 SID. The design results in a minimal degree of dispersion during the turn. However, this could be exacerbated by the lower speed limit impacting the flight crew workload. The dispersal is too wide increasing the risk of a loss of aircraft separation	There is a view from ATC that this option would conflict with following aircraft also using the Gatwick Airport Route 4 SID. The design utilises three initial turning points placed sequentially 400m apart, followed by 3 waypoints placed abeam each other after the turn. This results in several potential routes that an aircraft may take and a large degree of dispersion. However, the choice of turning point and waypoint cannot be predicted. This option would increase Flight Crew and/or ATC workloads a result of the uncertainty in potential route, thus increasing the risk of a loss of horizontal and/or vertical separation	There were no safety risks highlighted for this option during the Safety Assessment. ATC commented that it would allow the traffic to be managed more efficiently and offers a very low probability of any loss of separation between subsequent departures. The near continuous turn provides consistency of track and therefore separation is easier to assess from an ATC perspective.