



DIRECTIONS FOR GROWTH

Aberdeen Harbour is a trust port - i.e. an independent statutory authority operating in a commercial environment for the benefit of the port's stakeholders. Under the Aberdeen Harbour Order Confirmation Act 1960, as amended, the Board has a responsibility "for the regulation and administration of the harbour undertaking", which by definition includes improving the port for future generations.



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SECTION 1



Introduction & Purpose

Aberdeen Harbour Board has prepared this report as an easy read summary of the broader options testing work that has developed in response to a recognised need for future expansion of harbour facilities. This marks the conclusion of a period of work which to date has been undertaken mainly by Aberdeen Harbour Board and their appointed partners, that sought to identify options for the future of the harbour.

Our initial 'Case for Growth' document was sent to a wide range of stakeholders, including customers, statutory agencies and members of the public in September this year. The feedback to that document has been very positive. Early engagement with Aberdeen City Council and other key stakeholders has been constructive and in this paper we summarise some of those discussions, explaining how the current options being considered in the latter part of this paper have emerged.

Expansion at Aberdeen harbour is an ambitious proposal. The Port is physically limited by its City Centre location and neighbouring uses. Significant expansion of facilities may require quite a radical solution – and perhaps a new port facility. In this document we seek to openly and transparently explain the reasoning for identifying, then discounting, early options for expansion. We also clearly identify the criteria that have and will continue to shape our journey as we move towards a preferred location for growth. This paper takes into account the views of the key stakeholders that we have spoken to, as well as information gathered via desk-based surveys.

The Case for Growth document and this options testing process will feed into the various tiers of strategic planning from the emerging National Planning Framework to the Local Development Plan, and has the potential to form the basis of aspects of environmental assessment through either the Environmental Impact Assessment process or, if required, Habitats Regulations Appraisal.

This is the first time that we had the level of information required to be able to share the detail of these proposals and the selection process with members of the public. We have already organised a series of workshops with key stakeholders and we will engage more openly with communities in the early part of 2013. Before we do so it is our intention that we have a limited number of options that we believe will be financially viable, physically deliverable and minimise any negative impacts on the environment and local communities. We hope you find the information contained within this document useful and we welcome your thoughts and comments going forward.



Background

In September 2012, Aberdeen Harbour Board released a Case for Growth document, which set out the current situation in terms of Harbour operations and the management of its estate. This effectively represented the first public acknowledgement of ongoing work which considered the harbour's future, in terms of capacity and its ability to continue to serve its existing customers as well as attracting new streams of business, thus continuing to play a critical role as Scotland's northern gateway.

Aberdeen harbour is now operating close to capacity and the lack of available land for the creation of new berths, combined with the inability to make further gains through reconfiguration, is hindering its potential and could lead towards a decline in harbour operations. Our Case for Growth document confirmed that in order to continue to grow as a business and to avoid the loss of trade and industry and the associated skills from not just Aberdeen and the north east, but from Scotland as a whole to overseas competitors, there is a pressing need to consider ways to accommodate expansion of the existing facilities at Aberdeen.

Aberdeen harbour has been identified in the National Renewables Infrastructure Plan, alongside a number of other ports, as offering potential to facilitate the establishment of a strong renewables industry in Scotland. Aberdeen is specifically identified as having scope to contribute towards distributed manufacturing and operation/maintenance of offshore renewables.

A Scoping Report carried out by Fisher Associates on behalf of the Harbour Board identifies significant opportunities for growth in new and existing markets which could be captured if facilities were expanded.

The Scoping Report confirms that:

- The outlook is for a steady rise in oil production in West Africa and that this will continue to be a significant market for shipments of oil and gas equipment from Aberdeen.
- The expected level of decommissioning over the next decade is considerable and that it is estimated that before the year 2020 the requirements for support vessels servicing decommissioning activities will be greater than for drilling.
- There is considerable potential for developing and supporting offshore wind farms from Aberdeen.
- Aberdeen is a natural base for marine energy support services, construction and fabrication.
- Oil and gas related shipments between Aberdeen and Norway and Russia should grow by at least 3% per year.
- Modest growth is anticipated in the passenger and car market.
- If facilities to accommodate larger vessels were developed then Aberdeen could enter the Northern European cruise market and attract around 40 - 60 ships per year.



Our Criteria

Emerging options require to be considered against a range of criteria. In order to properly consider the options available, a number of criteria were identified for each option to be tested against. These are:

- The Aberdeen Harbour Board Constitution;
- Proximity to existing Port boundary;
- Business Case;
- Deliverability;
- Accessibility (Road/Rail);
- Community Benefits;
- Environmental Impact;
- Landscape and Visual Impact; and
- Minimising Traffic Impact and Disruption.

These options were later subject to discussion with Aberdeen City Council and other stakeholders who agreed on their suitability for the intended purpose. Feedback from Aberdeen City Council in response to these suggested criteria has been positive. However, the Council's role is clear, and any advice received at this stage is without prejudice to consideration of inclusion of any potential proposal in the emerging Local Development Plan or the consideration of any potential planning application.

At this stage, the Harbour Board and Council recognise that as well as there being a need to document the process to date, the consideration of the options, which are identified later in this paper, is currently being carried out in discussion with key stakeholders and regulators.

CONSTITUTION

Aberdeen Harbour Board is an independent statutory body, also known as a trust port authority, which operates in a commercial environment. In terms of the Aberdeen Harbour Order Confirmation Act 1960, as amended, the Board has a responsibility to regulate and administer the harbour undertaking for the benefit of the port's many and varied stakeholders. By definition this includes maintaining and improving the port's infrastructure for future generations.

PROXIMITY TO EXISTING PORT

The relationship and close proximity to the existing port facility at Aberdeen is key for a number of reasons. Firstly, the facilities offered at the existing port are critical for servicing the strong customer base located in the city and immediate region. Relocation or diversion of this business elsewhere would result in unsustainable traffic patterns and the potential loss of the skills and knowledge base that exists in Aberdeen.

Secondly, the current port limits extend two nautical miles north of the mouth of the River Dee and ¼ miles south. Anything outwith this area cannot be developed by Aberdeen Harbour Board without requiring new or revised legislation.

The practicalities of a working relationship between the existing port facility and any extension or new facility outwith the existing port boundary is therefore a key consideration.

BUSINESS CASE

Fundamentally, the chosen option requires to be financially viable, otherwise proposals simply cannot progress.

The options testing process currently being undertaken will serve a number of purposes, feeding into Environmental Impact Assessment, Habitats Regulations Appraisal, Strategic Environmental Assessment and development plan promotion to name a few, but it must conclude and identify a location. This is critical in order that a proper business case can be prepared and assessed to establish whether the concept can be realised.

Until a site is selected and the full business case progressed, none of the options can be fully considered.

Some important aspects of the business case need to be anticipated at this early stage. For example, the amount of operational land and berths which need to be delivered will be critical. The length of new quays and amount of dredging required for a particular site (both factors which will significantly impact upon construction costs) require a more detailed consideration.

DELIVERABILITY

As well as being financially viable, each option should be considered against the route to delivery and any perceived obstacles, both physical and procedural. The ability to achieve the necessary consents is paramount and a development of the nature proposed will require to undergo several regulatory processes. These might include and are not limited to:

- Identification in the development plan
- Planning permission
- Marine licence
- Environmental Impact Assessment
- Strategic Environmental Assessment
- Habitats Regulations Appraisal
- Roads Construction Consent
- Traffic Regulation Orders
- Harbour Development / Revision Orders

In addition to the consenting process, land ownership/availability and infrastructure capacity will also influence the deliverability of each option.

Some of the elements which contribute to or detract from the deliverability of an option will also be considered as part of other assessment criteria.



ACCESSIBILITY (ROAD/RAIL)

The Pre-Feasibility Study carried out by HR Wallingford on behalf of the Harbour Board and referred to later in this document worked on the assumption that improved road and rail access would be required to allow any expansion of the harbour to link to the existing road/rail networks.

There is a need to minimise adverse impact upon the existing transport infrastructure network, in particular in the City Centre which is already at capacity during peak times. Where infrastructure upgrades might be necessary to facilitate development at any of the options then these should be identified as early as possible.

COMMUNITY BENEFITS

As mentioned above, the regeneration implications of any proposed development are a key consideration in site selection. Where an option could result in much needed investment in certain communities these should be given due consideration.

Similarly, where an option would result in adverse impacts upon amenity and vitality of an area then this should also be taken into account.

ENVIRONMENTAL IMPACT

Each option presents a number of different environmental considerations, of varying significance. The presence of areas protected for their ecological attributes, including protected species, and how development might impact upon these habitats and species must be afforded proper scrutiny. Similarly, any sites of cultural, historical or geological significance should also be taken into account in order that adverse impact is either avoided or properly understood and mitigated against.

LANDSCAPE AND VISUAL IMPACT

Development on the scale envisaged is likely to have an impact upon the landscape and each location should be assessed for its capacity to absorb development.

MINIMISING TRAFFIC IMPACT AND DISRUPTION.

The ability to create the new facilities or alter existing with minimal disruption to existing harbour traffic is crucial. If certain options would sterilise or reduce existing operations to an extent that it would affect business and specifically relationships with Harbour users, then this must be carefully balanced with the gains to be achieved through new development.



SECTION 2



Pre-feasibility Study

As part of the initial investigations HR Wallingford produced a Pre-Feasibility Report on behalf of Aberdeen Harbour Board which looked for potential locations for a deep water port facility along the Aberdeen coastline approximately 1 mile to the north of the mouth of the River Dee and 5 miles to the south. The extent of this area of search was partially selected by Aberdeen Harbour Board to be within Port Limits, beyond which the Harbour Board as a Trust Port cannot operate.

This length of coastline to the south is predominantly rocky and exposed to waves from the North Sea with little natural protection. For this reason options were limited and the majority of locations along this stretch were ruled out due to the lack of existing physical features which would enable new facilities to be created without significant upfront costs, which from the outset would render the development financially unviable.

As a result, the Report then identified and considered more closely the potential of 3 locations which demonstrated physical capacity to accommodate new harbour facilities. These were:

- North Beach -immediately to the north of the mouth of the existing Harbour entrance;
- Nigg Bay – immediately to the south of the river mouth; and
- South of Cove Bay – approximately 5 miles south of the river mouth.

A number of potential configurations were given high level consideration on each of these three locations to give an indication of physical works required and the extent of new facilities which could be achieved.



PORT LIMIT

2 NAUTICAL MILES

1

ABERDEEN
HARBOUR

2

3

Three Directions for Growth

1 | NORTH BEACH

This location was considered due to its proximity to the existing harbour and the ability to tie in with the existing north breakwater. In each configuration considered, the landside access would be taken through the existing road network. Direct rail access to the south does not exist at present and would not be easily achievable.

2 | NIGG BAY

This location was considered due to its physical form being a natural bay with some shelter from the North Sea from Girdle Ness to the north and Greg Ness to the south. The length of breakwaters required could be minimised due to the existing features of the bay.

The main Edinburgh to Aberdeen railway line loops to the south of the site, and a secondary coastal road passes the bay. The principal road access could be taken from the grade separated junction on the A956 which serves Altens Industrial Estate to the south. Upgrades to the existing coastal road and rail crossing would likely be required.

3 | SOUTH OF COVE BAY

This location is on a straight stretch of rocky coast with no natural bays of any scale which could accommodate a new facility. The lack of development immediately inland from this location, other than a quarry, made it worth of further consideration.

Again the Edinburgh to Aberdeen railway line passes along the coast near to the site. Formation of a new road access from the A956 trunk road would be required.

Options

The Pre-Feasibility Study considered between 3 and 6 potential options for each site and prepared construction estimates considering:

- Breakwater
- Quay
- Dredging
- Reclamation
- Facilities
- Indirect Costs

A high level assessment of each option was also made which considered:

- CAPEX - Capital Expenditure evaluation based on the comparative capital constructions costs.
- OPEX - Operating Expenditure, including management and labour costs, energy, fuel and lubricants costs, comms and IT, civil maintenance costs, equipment maintenance costs and other operating costs such as marketing, legal, insurance.
- Marine Operability - Ability to manoeuvre to and from the berths including navigation, approach and berthing and evaluation of down time as a result of weather/wave conditions.

- Environmental Issues - Potential impact upon environmentally sensitive areas and the existing coastline.
- Landside Access and Operations - Existing and proposed road and rail networks.
- Constructability and Project Schedule - Ease of material delivery, construction execution and timing.

Following this exercise, each of the various options were scored according to the adopted assessment matrix. The 6 options for South Cove all scored poorest and were ranked 8 - 13 out of the 13 options.

It was apparent that due to the lack of natural or existing physical features, and in particular the need for the creation of extensive new breakwaters, land reclamation and dredging, construction costs of a facility at South Cove was considerably higher than potential options for options both at North Beach or at Nigg Bay, so much so that the construction costs alone would be likely to render the proposals financially unviable. In addition, due to topographical constraints along this stretch of coastline, accessibility to any harbour facility would be extremely challenging.



For these reasons land south of Cove was not considered further.

Development options for Nigg Bay ranked 1st and 4th and two for North Beach ranked 2nd and 3rd. The report advised that these two sites and configurations should be considered further.

Following the completion of the Pre-Feasibility Report Aberdeen Harbour Board commissioned a further study by Fisher Associates in association with HR Wallingford. This was a Strategic Review: Scoping Report, which considered the following:

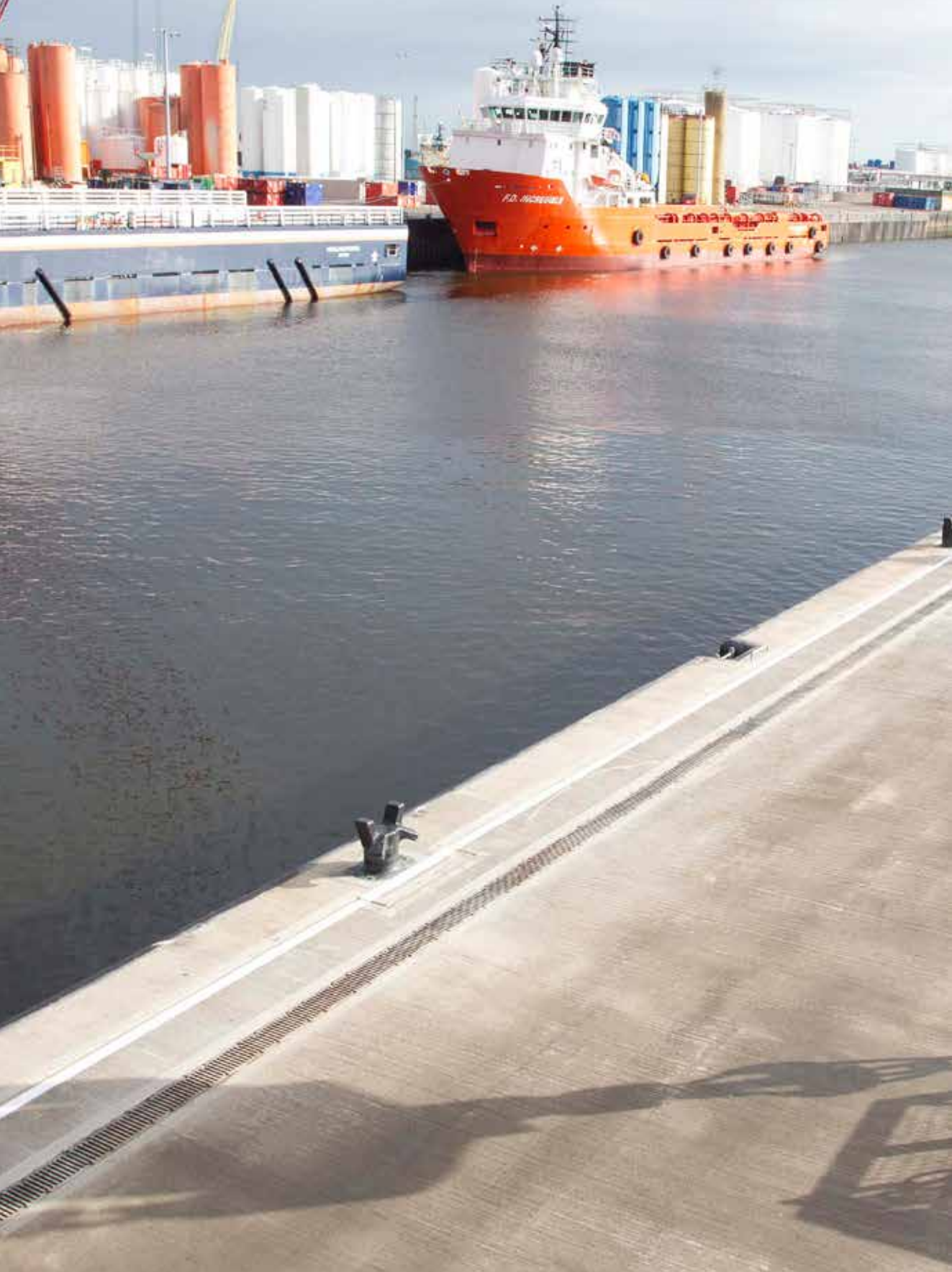
- The long term strategic outlook for port activity in Aberdeen.
 - Whether development of a new harbour could be justified.
 - What approach to development might be the most feasible.
- Whether the best options pass a reality test in terms of funding.
 - The strategic implications of undertaking such a development, and of not undertaking this.

Importantly, this report considered both “do nothing” and “do something” scenarios, with the former pointing towards a “managed decline” of the Harbour and the latter considering some of the options for Nigg Bay which emerged from the Pre-Feasibility Study along with the possibility of further works within the boundary of the existing harbour estate.

These studies will feed into the options testing process, currently the subject of this document along with high level assessment against the criteria identified in the Case for Growth.



SECTION 3



Workshops

Following completion of the Pre-Feasibility Report and Scoping Report, both Aberdeen Harbour Board and Aberdeen City Council were conscious of the need to open up this latter stage of testing to other stakeholders. As we move toward selection of a location, three options are being given further consideration:

- The existing harbour
- North Beach
- Nigg Bay

In light of the discussions with Aberdeen City Council and other stakeholders, it was agreed to hold 3 topic based workshops to further consider the options. These were themed around Transportation, Planning and Environmental considerations and invitations were issued to representatives from:

- Aberdeen City Council
- Aberdeen City and Shire Strategic Development Planning Authority
- Scottish Natural Heritage
- Scottish Environmental Protections Agency
- Marine Scotland
- Transport Scotland
- First Bus
- Stagecoach
- Network Rail
- NESTrans
- ARR Craib
- Scottish Water
- RSPB
- Scottish Dolphin Centre

The key messages which came out of the three workshops can be roughly summarised as follows.

EXISTING HARBOUR

Transportation

- Market Street would need to remain the principal access to the Harbour.
- The AWPR is expected to free up capacity in the city centre road network by around 5% - 8%.
- Post-delivery of the AWPR and related infrastructure improvements, the city centre road network could accommodate a limited increase in Harbour traffic of around 10% - 15%.
- Any capacity benefits from the AWPR would be taken up with the increase in Harbour traffic.
- This option presents no opportunity to improve the traffic situation in the city centre and will represent an increase in traffic even if there is associated mitigation.

Planning

- The intensification of this existing use would be unlikely to raise insurmountable concerns in land use planning terms.
- The impact upon the SAC must be carefully considered and each option balanced against one another.
- There may be scope to acquire additional land on the northern side of the harbour for landward expansion and intensification.
- There is no opportunity for new berth creation, only upgrading existing berths, resulting in a lost opportunity to respond to existing customer needs and attract additional business.
- Acceptance that this option may represent maintenance of the status quo or even managed decline.

Environment

- Potential for impact upon River Dee SAC, marine mammals and birds during construction.
- Minimal landscape impact

NORTH BEACH

Transportation

- Market Street would need to remain the principal access to the Harbour.
- The AWPR is expected to free up capacity in the city centre road network of around 5% - 8%.
- Post-delivery of the AWPR and related infrastructure improvements the city centre road network could accommodate a limited increase in Harbour traffic, however for the level of investment required, the reality is that the increase in Harbour traffic would be much greater.
- Any capacity benefits from the AWPR would be taken up with the increase in Harbour traffic.
- Achieving a rail connection to the North Beach option would be a significant challenge due to land ownerships between.
- This option presents no opportunity to improve the traffic situation in the city centre and will represent an increase in traffic even if there is associated mitigation.

Planning

- The landscape and visual impact and impact upon the amenity and character of the city is so significant that this does not represent a realistic option and should be discounted.
- The impact upon amenity would be contrary to the spirit of Aberdeen Harbour Board's constitution.
- Planning permission unlikely to be achievable.

Environment

- The landscape and visual impact is significant.
- Close proximity to the River Dee SAC
- Potential impact upon marine mammals.
- Potential impact upon birds.

NIGG BAY

Transportation

- The coast road to the south of Nigg Bay is already used by Heavy Goods Vehicles and could accommodate a significant increase in HGV traffic.
- If upgrading of the road is required, it is likely to be achievable.
- Potential exists for the creation of a transportation loop servicing the existing industrial estates at East Tullos and Altens and a new harbour.
- Network Rail requires to feed into proposals for rail crossing / halting.
- Likely to avoid increase in city centre traffic and would not result in loss of potential benefits of AWPR.

Planning

- Potential impact upon amenity of Torry.
- Possibility for physical regeneration of Altens and Tullos industrial estates as well as an opportunity to work with the community of Torry to realise their objectives.
- Consideration required on impact upon and opportunities for recreation.
- Landscape and Visual Impact is a key issue.

Environment





- The landscape and visual impact would be significant.
- Of the three options, this is furthest from the River Dee SAC.
- Presence of SSSI would require careful consideration to minimise impact.
- Potential impact upon marine animals and birds.
- Protected plant may be present at this site, (*Lathyrus japonicus* - common name Sea Pea) which should be carefully considered.
- A listed lighthouse lies to the north of the site at Girdle Ness. Impact upon setting will require consideration.

The outcomes of the workshops, along with desk-based analysis and the findings of the Pre-Feasibility Study and Strategic Review: Scoping Report have informed the consideration of the final three options against the agreed criteria.





-  The Existing Harbour
-  Urban green space
-  Greenbelt
-  Urban development
-  Views

Accessibility (road/rail)

-  Railway
-  Aberdeen Railway Station
-  Traffic pressure on the local road network (inc. Market Street)
-  Union Square and North Dee development to the west forming a barrier between the Harbour and Aberdeen Railway Station

Environmental

-  River Dee is designated Special Area of Conservation (SAC)
-  Significant engineering and demolition works

▲ City and community impact

▲ Community Impact

Assessment of Directions

The Existing Harbour

This option would mean acceptance of Aberdeen Harbour as a fully mature business, with future development focussed on its current estate in a programme of consolidation and internal adjustment. Three potential options were considered in the Scoping Report, offering limited capacity for larger vessels while simultaneously reducing overall berthing.

BUSINESS CASE

As described previously, the business case cannot be considered fully until a site is selected and assessed in detail. Notwithstanding, some high level consideration can be made with regard to the economic implications in terms of port business.

The physical limitations which constrain the expansion of current site outwards are equal internally. The current harbour comprises two main peninsulas which in their present configuration cannot facilitate the larger vessels required for decommissioning, offshore renewables or large cruise ships without loss of existing berths. Current maximum ship length is 165m. In order to accommodate turning circles for larger vessels, sections of the existing peninsulas would require to be removed and other areas sterilised while ships were turning, thus further reducing capacity.

The Fisher Associates report confirms that if provisions are not made for larger ships then ferry services, off-shore renewables and decommissioning work is likely to relocate elsewhere. Therefore, this option would result in significant compromise in terms of new and existing facilities.

The future development options which have already been considered such as Torry Quay Phase 3 and redeveloping the former fish market area would upgrade existing berths but not provide any new ones. The costs/benefits will require consideration to establish whether these stack up.

The Planning Workshop highlighted a need to consider land to the north side of the Harbour, not currently in the ownership of AHB, as the perception is that it is presently underused. This should establish whether better use could be made of it for landside operations as it was agreed that there was no scope for the creation of new berths into this area. It is recognised that the Harbour Board already operate a programme of land assembly and purchase any land which comes available around the Harbour. However, to date, this has offered little scope for meaningful increase in operational area.

DELIVERABILITY

The current Harbour is covered by a Harbour Order under the 1964 Harbours Act, which affords permitted development rights to all works within its boundaries. As such planning permission would not be required for the works within its boundaries and the intensification of this existing use would be unlikely to raise major concerns in land use planning terms. The Harbour Order does not however negate the need for Environmental Impact Assessments or Habitats Regulations Appraisal under the Conservation (Natural Habitats, &c.) Regulations 1994 and with the presence of protected habitats and species in and around the Harbour, these would be of considerable importance.

As the road network surrounding the Harbour already exists, the delivery of the materials etc. for construction can be carried out without the need for physical upgrades, however there are obvious implications for congestion and network capacity.

ACCESSIBILITY (ROAD/RAIL)

Any further expansion within the existing estate boundary would continue to be served via the existing road network through the City Centre. Any increase in activity would have a direct impact upon the local road network, including Market Street which is already under pressure at peak times.

The Transportation workshop established that although constrained at present, the existing road network could physically accommodate an increase in harbour traffic post-delivery of the AWPR and related infrastructure improvements, but this would likely be to the detriment of the City Centre and would negate the benefits achieved by the construction of the AWPR.

PROXIMITY TO EXISTING PORT

This option would not give rise to any issues with regard to remoteness from the existing port.

COMMUNITY BENEFITS

The opportunities for regeneration to be achieved in and around the existing harbour would be limited as works would predominantly be internal.

The amenity of the City would likely be affected if there was an increase in road traffic to and from the Harbour and any benefits arising from the AWPR would be lost.

ENVIRONMENTAL IMPACT

The River Dee is designated as a Special Area of Conservation under the Conservation (Natural Habitats, &c.) Regulations 1994 due to the habitat that it provides for certain species. At the Harbour, the species of relevance are the Atlantic Salmon and the Otter, the latter of which is a European Protected Species.

Dolphins are regular visitors to the Harbour, are protected by another SAC, and are also a European Protected Species. Any works which might impact on these species requires a license. Similarly, any proposals for development which might affect the integrity of a Natura site such as the River Dee Special Area of Conservation will require to be the subject of Habitats Regulations Assessment and potentially appropriate assessment.

Major engineering and demolition works such as those likely to be carried out under this option could potentially require significant mitigation in order to be accommodated without adverse impacts upon the biodiversity of the site. Any works may involve dealing with contaminated land.

LANDSCAPE AND VISUAL IMPACT

The site is an existing industrial location and, within reason, any additions would be unlikely to cause significant adverse landscape and visual impact.

MINIMISING TRAFFIC IMPACT AND DISRUPTION

Internal works within the existing harbour have a direct impact upon availability of berths during construction. If the more significant of the three options within the existing harbour were pursued, not only would berth space be reduced overall, the interim arrangements during construction would have a seriously detrimental impact upon operations and capacity.



SUMMARY - EXISTING HARBOUR

As previously mentioned, limiting the future growth of Aberdeen Harbour to the existing estate and any additional areas of land which might be acquired on its fringes effectively represents the managed decline of the Harbour and its business in the long term. A compromise would be required between existing berth space and the ability to accommodate larger vessels.

If the decision was made to redevelop the Harbour to accommodate larger vessels, the environmental implications of the demolition of existing quays, redevelopment and dredging/blasting could be considerable. While not necessarily insurmountable, as has been demonstrated by recent works within the Harbour, these could present difficulties in obtaining the relevant permissions and licences as well as limiting the ability to physically deliver the development.

The continued reliance on the city centre road network is also a hindrance to this as an option. If traffic were to increase significantly, the local road network, post-delivery of the AWPR, could accommodate this, but to the detriment to the amenity of the city.

This option will remain under consideration as a “Low/No Growth Option” in the event that others cannot proceed. Regardless of whether this option is accepted or expansion elsewhere is achievable, consideration will be given to the ability to create more landside operational area to the north.



North Beach



Urban green space



Greenbelt



Urban development



Views

Accessibility (road/rail)



Railway



Aberdeen Railway Station



Traffic pressure on the local road network (inc. Market Street)



Union Square and North Dee development to the west forming a barrier between the Harbour and Aberdeen Railway Station



Existing road network through Footdee

Environmental



River Dee is designated Special Area of Conservation (SAC)

Landscape & City Wide Impact

FOOTDEE

Community Impact

Listed Building (Lighthouse)

North Beach

The development of a new deep-water port facility north of the existing harbour mouth could be accommodated by extension onto the beach. This would require the creation of new breakwaters to the north and the extension of the existing North Breakwater. Six potential configurations were considered at the Pre-Feasibility Report stage with varying gains to be achieved from each.

BUSINESS CASE

As with each of the options, the full business case cannot be considered until a site and build option is selected.

In terms of cost, of the three potential options, the development of North Beach would require the most dredging and most significant new breakwater creation. This would significantly impact upon construction costs.

DELIVERABILITY

Planning permission would be required for new development at the North Beach option. This would be informed by the same environmental considerations as apply to works within the harbour referred to previously (EIA, HRA etc.) and would also be considered against likely road traffic impacts associated with the proposed development. At the Planning Workshop it was suggested that the impact upon the character and amenity of Aberdeen was so significant that planning permission for development of the scale envisaged was unlikely to be achievable on this site.

As the road network surrounding the Harbour already exists, the delivery of the materials etc for construction can be carried out without the need for physical upgrades. However, there are implications for congestion and network capacity which would be a consideration in the determination of a planning application.

The site is identified in the Aberdeen Local Development Plan as Urban Green Space and Coastal Management - Coastal Area Development. The former carries a presumption against development not used for the purpose of sport or recreation. The consideration of these proposals through the development planning process will establish whether a re-designation would be appropriate.

ACCESSIBILITY (ROAD/RAIL)

Vehicular access would require to be taken through the existing road network which is already constrained. Traffic leaving the Harbour would have to travel through the city centre, and traffic linking the two would increase the traffic impact around Footdee. Neither options are likely to be attractive to the City Council or local residents and businesses.

Attendees of the Transportation workshop considered that although constrained at present, the existing road network could physically accommodate an increase in harbour traffic of around 10% -15%, following delivery of AWPR and related infrastructure improvements, but this would be to the detriment of the city centre and would likely negate the benefits achieved by the construction of the AWPR.

The Fisher Associates Feasibility Report scored this location poorly for Landside Access and Operations, which was the lowest score of the three options it considered.

Direct rail access to the south is currently not available at this location and provision of rail infrastructure would be a challenge given its distance from the existing harbour rail sidings at Waterloo Quay and also the main rail facilities in the city centre.

PROXIMITY TO EXISTING PORT

This location is in close proximity to the existing harbour and could undoubtedly operate in tandem. The skills and workforce which already exist in Aberdeen around the existing harbour would be of benefit to the new facility and the two need not conflict. The site's central location would not result in unsustainable travel patterns, however, its immediate proximity also carries with it a level of impact during the construction phase.

COMMUNITY BENEFITS

The regeneration objectives which could be achieved are limited. The village of Footdee which is adjacent to north beach is attractive and is not a regeneration priority. Any impact upon Footdee would be likely to be adverse due to traffic impact and setting.

The loss of this area of beach which is used for leisure and recreation would also give rise to adverse affects to amenity.

Indeed, the impact upon the amenity of the city in landscape and recreation terms was considered at the Planning Workshop to be insurmountable and probably contrary to the spirit of Aberdeen Harbour Board's constitution. It was considered that the civic impact as a result of the development of this option would affect the most citizens, albeit the impact would be transient. The amenity of the city would also likely be affected if there was an increase in road traffic to and from the Harbour over and above the 10% - 15% previously discussed. Any medium term benefits arising from the AWPR would likely be absorbed by this expansion.

ENVIRONMENTAL IMPACT

The same designations as apply to development within the existing harbour are relevant to development at north beach due to its being immediately adjacent to the mouth of the River Dee and in turn the SAC. The point at which the existing North breakwater would require to be significantly extended is a location of regular dolphin sightings.

The extensive marine construction which would be required to realise development at this location coupled with the increase in operational activity following completion may give rise to significant adverse affects upon the SAC and protected species. Effects as a result of development outwith the SAC boundary also require consideration, such as impacts upon salmon migratory routes, or dolphins which are regularly sighted around north pier.

LANDSCAPE AND VISUAL IMPACT

The landscape and visual impact upon the setting of the city as a result of this option would be significant. Views from Footdee and from the beach would be significantly affected, as would views toward the city from Girdle Ness to the south.

MINIMISING TRAFFIC IMPACT AND DISRUPTION.

While the impact upon harbour operations during construction would be less severe than increasing development within the existing harbour, the extension of the north breakwater from that existing at North Pier would heavily constrain the passage of vessels through the existing river mouth during the construction phase which from a commercial perspective is not desirable.



SUMMARY - NORTH BEACH

The development of a new port facility at North Beach would provide an overall, increase in berthing capacity and offer the facilities required to accommodate larger vessels. It could operate without impact upon the existing Harbour, although there would be an impact during construction.

The need for vehicular traffic to utilise the existing road network through the City Centre would be a considerable constraint. The increase in the volume of traffic generated at the Harbour would likely be considerable and put more pressure on the already constrained network. While it was accepted at the Transportation workshop that post delivery of the AWPR the City Centre road network could potentially accommodate an increase in Harbour traffic of around 10-15%, the reality is that for the significant level of investment required,

there would be a requirement for more significant increase in Harbour activity to make the investment worthwhile.

As with the option for the Existing Harbour the environmental considerations are considerable at this location. SNH indicated during discussions that this option would be likely to have a significant impact upon marine mammals.

The environmental and traffic impact and impact upon amenity will make obtaining planning permission very difficult if not impossible. Planning officers at Aberdeen City Council have indicated that this option would not receive Council support. Indeed it was recommended that this option is not pursued any further. The outcome of the workshops alongside informal soundings with key stakeholders has led Aberdeen Harbour Board to discount this option in the short term.



-  Nigg Bay
-  Urban green space
-  Greenbelt
-  Urban development
-  Views

Accessibility (road/rail)

-  Railway
-  Aberdeen Railway Station
-  Traffic pressure on the local road network (inc. Market Street)
-  Union Square and North Dee development to the west forming a barrier between the Harbour and Aberdeen Railway Station
-  Potential vehicular access via Coast Road. This would likely require upgrading to dual width
-  Improved railway crossing
-  Potential vehicular access via Greenbank Road
-  Rail freight yard

Environmental

-  River Dee is designated Special Area of Conservation (SAC)
-  SSSI Site of Special Scientific Interest

Listed Building (Lighthouse)

Community Impact

SSSI

Nigg Bay

The third option is the creation of a new deep-water facility at Nigg Bay, south of the existing harbour, beyond Girdle Ness.

BUSINESS CASE

Nigg Bay offers the most scope for flexible new berth creation. Estimated construction costs identified in the Pre-Feasibility Study and Scoping Report carried out to date indicate that this location is the most attractive in terms of upfront costs. The natural features of the bay mean that minimal breakwater creation is necessary and dredging is less than the North Beach option.

These factors mean that Nigg Bay presents the option most likely to be financially viable at this stage, albeit additional infrastructure costs such as road and rail upgrades/creation are still unknown.

DELIVERABILITY

Planning permission would be required for new development at Nigg Bay. This would be informed by the same environmental considerations as apply to works within the harbour referred to previously (EIA, HRA etc.) and would also be considered against likely road traffic impacts associated with the proposed development. The location away from the River Dee SAC and slightly removed from the city centre road network makes it less likely to face obstacles at planning application and at environmental and transportation assessment stages than the two city centre options.

The existing road network around Nigg Bay already accommodates HGVs but may require physical upgrading, particularly the coast road and the railway crossing to enable both construction and future access from the south.

Nigg Bay is identified in the Aberdeen Local Development Plan as Green Belt, Green Space Network and Undeveloped Coast. The Green Belt policy carries a presumption against development not required for the purposes of agriculture, forestry or recreation or for essential infrastructure. Green Space Network also presumes against development that would significantly affect its function as such, and where development is permitted requires that mitigation measures are put in place.

The Undeveloped Coast policy sets a number of criteria against which proposals for development must be tested.

The consideration of these proposals through the development planning process will establish whether a re-designation would be appropriate.

ACCESSIBILITY (ROAD/RAIL)

The primary vehicular access would be taken from the coast road which presently passes the site. This may require upgrading and may also require improvements to the existing railway bridge. Importantly, this would mean that some Harbour traffic could come and go via the neighbouring industrial estates and potentially avoid the City Centre. Careful management of some vessel traffic to either port depending on cargo destination presents scope to reduce vehicular traffic in the City Centre long term.

The rail network passes Nigg Bay and could present an opportunity for a new halt and rail link to the new harbour facility. In addition, links to the existing rail freight facilities at Craiginches could also be considered. Network Rail were unable to attend the workshops but would require to feed into discussions regarding the delivery of any rail crossing and halt.

The opportunity therefore presents itself for the creation of a loop road between a new harbour, the adjacent rail infrastructure and the existing industrial estates at Altens and East Tullos.

PROXIMITY TO EXISTING PORT

While Nigg Bay is not as close to the existing facility as options within the current estate boundary or at North Beach it is sufficiently close to the Harbour and City to utilise existing infrastructure and feed into the skills and knowledge base that exists in the City without resulting in unsustainable travel patterns. It lies within the Port limits but would require some alteration to existing legislation to accommodate development.

COMMUNITY BENEFITS

Nigg Bay lies in relatively close proximity to the community of Torry and to Altens and Tullos Industrial Estates. These areas could benefit from regeneration, and in the case of Torry, is already identified as a regeneration priority by the City Council.

The potential adverse impacts upon local communities are arguably lesser than those which would be experienced at the North Beach option, but nonetheless would require to be carefully considered and mitigated against. The use of Nigg Bay and the surrounding area for recreation is variable and requires further consideration to establish impact and whether there is any scope for improvements.

ENVIRONMENTAL IMPACT

Nigg Bay is located further away from the River Dee SAC and as such would be less likely to have any significant impact upon its defining features, habitats and species within that the other two options. Similarly, there is less evidence of dolphins in and around the bay, although confirmation of this would be subject to survey.

The cliff facing into the bay on its southern side is identified as a Site of Special Scientific Interest (SSSI) for its geological merits. The site is of interest due to ongoing coastal erosion processes. Any impact upon this feature would require to be carefully considered and managed appropriately. At this

stage it is considered that significant adverse impact on the SSSI could be avoided through design and mitigation. Primarily this would be achieved by leaving this section of rock largely undeveloped, however changes to hydrodynamics within the bay as a result of the breakwaters may give rise to changes in the erosion process and would require consideration.

Scottish Natural Heritage have confirmed the potential presence of the “sea pea” (*Lathyrus japonicus*) at Nigg Bay, a locally important species of flower which is scarce in the area/Scotland. This would require to be the subject of survey and potentially employment of mitigation measures.

The need to survey for birds and assess any impact upon species associated with nearby Special Protection Areas was also identified by SNH and the RSPB.

LANDSCAPE AND VISUAL IMPACT

The Bay is relatively open and views into it from Girdle Ness and Gregg Ness on either side would be affected. Similarly, views from Torry would be affected. The bay is seen from these views in the context of significant existing development including Altens Industrial Estate, the railway line, Scottish Water facility and the community of Torry itself.

Girdle Ness Lighthouse is sited to the north of Nigg Bay and is an A-Listed building dating from 1833 and becoming listed in 1967. Impact upon its setting would require consideration. Given the nature of the proposed development and the nautical origins of the lighthouse, the two are not considered to be incompatible.

MINIMISING TRAFFIC IMPACT AND DISRUPTION.

Given that Nigg Bay does not lie immediately adjacent to the existing harbour it is anticipated that it could be constructed and operational without any adverse impact upon current Harbour operations.



SUMMARY - NIGG BAY

As with both of the other options there are environmental implications which require careful consideration. The presence of a SSSI and any associated impact would require to be carefully considered and mitigated against. The site is further from the SAC than the other two options but will still require to be assessed for any potential impact upon its qualifying features and on any protected species in or around the site. Landscape and visual impact will also require careful consideration.

Significant opportunity for regeneration exists at this location, as does the scope to improve the current transport network and contribute towards the reduction of traffic in the City Centre.

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Emergence of Preferred Option

While not definitive in advance of completion of the business case, Nigg Bay is emerging as the preferred direction for growth and intended new harbour facility. In reality, the existing harbour does not provide scope to accommodate the new facilities required without compromising the current offer, increasing pressure on the existing transport network and creating potential for significant adverse environmental impact.

The consolidation and rationalisation of the existing Harbour Estate, including any incremental land acquisitions which might be achievable should stay live as a potential option in the event that neither of the options for a new port facility at North Beach or Nigg Bay can be progressed.

While North Beach might offer greater scope to create the required berthing space than the existing harbour estate, this again comes with traffic and environmental impact which may prove problematic to mitigate against. The development of this area would offer little in the way of community benefits and would result in adverse impact upon the amenity of the city centre and residents of Footdee. For this reason it would likely generate significant opposition from regulators, stakeholders and the public.

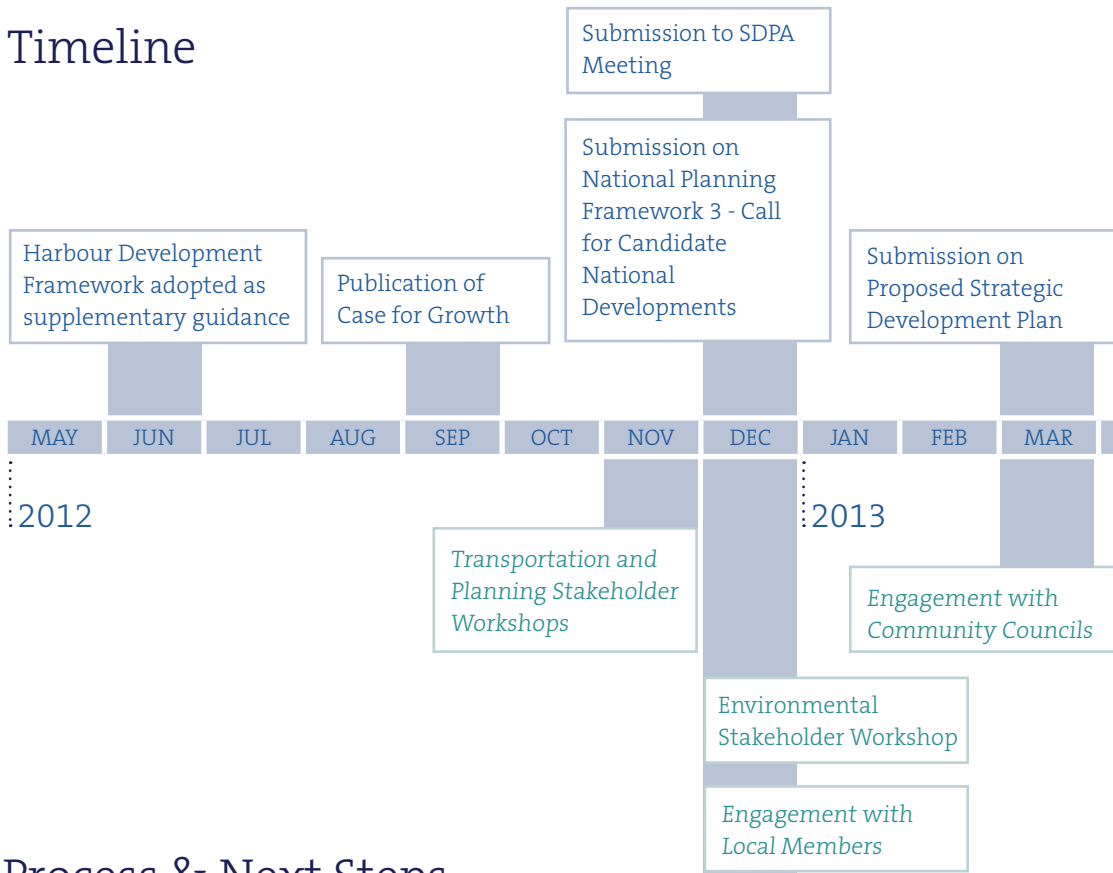
Nigg Bay appears at this stage to offer the greatest scope to accommodate a new deep-water facility with potential for the lowest environmental and traffic impact. Additional survey work and close working with stakeholders will be necessary in order to minimise the potential for environmental impact. The facility could be constructed with little to no impact upon the operations of the existing harbour. The opportunities for regeneration of nearby communities and areas such as Torry, Altens and East Tullos are considerable.

CONCLUSION

It is therefore recommended that development options for Nigg Bay are considered further with a view to exploring the potential for the creation of a new deep-water facility and the likely implications of such. Continued focus on the existing estate and those other options identified within this document cannot however be ruled out, in the event that the development of Nigg Bay cannot proceed. Proposals for creation of a facility at North Beach should not be pursued further at this stage.



Timeline



Process & Next Steps

As this process progresses, the intention is to proceed through the plan-led route. We will continue to work closely with Aberdeen City Council, the Scottish Government and other key stakeholders to feed into the various plan processes that are ongoing.

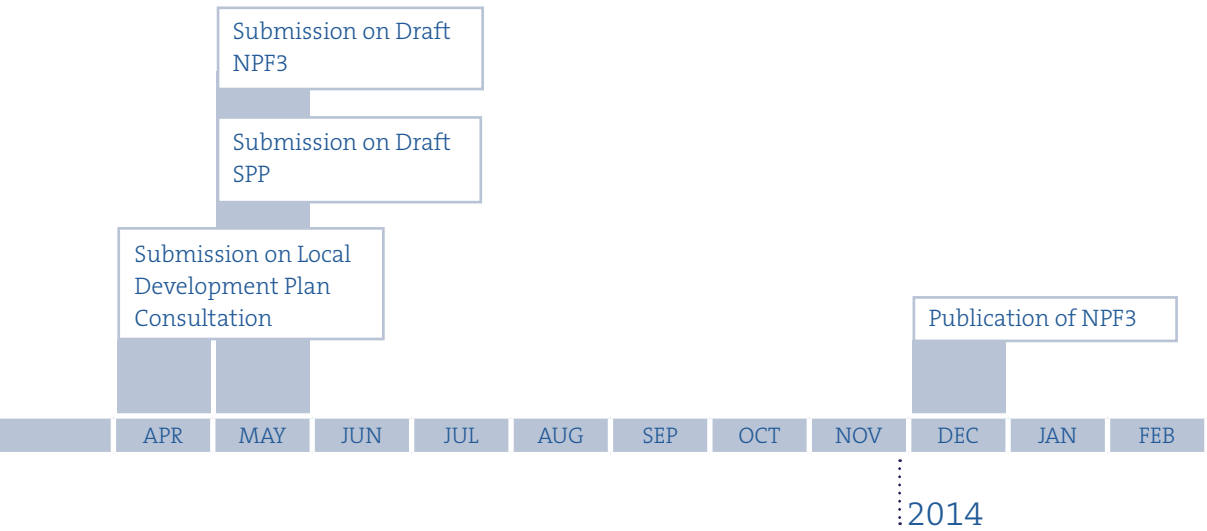
This document will accompany Aberdeen Harbour Board's submission on the Scottish Government's Call for Candidate National Developments for inclusion with the emerging National Planning Framework 3.

We will continue to feed into the Strategic Development Planning process, with the consultation on the proposed SDP likely to commence early 2013. The Proposed SDP already identifies the need for further work to set out in more detail the likely implications of this (building on 'The Case for Growth') and how the growth of the harbour can be accommodated to inform the next local development plan.

Submissions will be made on the initial stages of the local development plan consultation which is scheduled to commence early 2013. The Main Issues Reports for both the NPF3 and the LDP will open these proposals up to a wide audience for consultation.

Notwithstanding, Aberdeen Harbour Board will now seek to prepare its own programme of engagement to enable communities and groups who might be interested in or affected by the proposals to feed into the design process.

The identification of a preferred direction for growth also allows advancement of discussions with regulators and agencies as to the level of information required to advance the proposals through the design stage towards planning and environmental assessment. Necessary survey work can be identified and commissioned.



Engagement

Following on from the workshop process, Aberdeen Harbour Board unanimously approved the decision to move forward with two options for Candidate National Developments.

While the National Planning Framework process allows for such flexibility it was the Board’s view, and that of the City Council, that realistically the two options identified – low growth / gradual decline at the existing Harbour and a new facility at Nigg Bay – stood the best chance of passing the all important viability test and ultimately securing the necessary statutory consents.

The details of this approach are played out in the previous chapters of this document. This allows these options to be subject to a much greater level of detailed analysis in the forthcoming months. The Board reserves the right to consider alternatives should this detail investigative work identify unexpected constraints or unforeseen issues.

The Harbour Board also recognise the importance of continuing liaison with local members. A meeting was held prior to the NPF submission on 14th December where the options were presented to widespread support. This continued

the engagement that has taken place amongst key Aberdeen City Councillors and the SDPA Board. However this will now accelerate as detailed work gets underway. We know that local members around the Harbour will have specific interests and therefore we need the detail to answer their questions and provide assurances that cannot be given at the more strategic level.

Going into next year Aberdeen Harbour Board, propose to establish a working group with local members, representatives from the Community Council and local business people. This group will have a Torry bias as both current options are located close to that community, however (numbers allowing) other groups will have a say. The working group will have a remit to consider and influence the new Harbour proposals at the same time as championing the Action Plan that was identified in the Harbour Development Framework.

Representation to this group is currently being discussed with Aberdeen City Council.



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